Appendix C. Past Accomplishments

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Benefits from Fish and Wildlife Spending

What have the Direct Budget funds been spent on?

Since FY 1979 through FY 1997, BPA has obligated approximately $900 million in direct expenditures (see table).

Budget categories	Percent	Millions of dollars
Habitat	5	45
Production	8	72
Tributary Passage	6	54
Operations & Maintenance	14	126
Research & Monitoring	34	306
Resident Fish	10	90
Wildlife	11	99
Coordination	5	45
BPA Administration	8	72

What has been accomplished?

Habitat and Tributary Passage Improvements

- Protected riparian and upland habitat through purchase and easements, benefitting wildlife, resident fish and salmon in riparian areas.
- Improved several hundred miles of instream habitat by increasing cover, pools, stabilizing banks, and other in-stream structures.
- Improved more than one hundred miles of stream habitat by fencing to manage livestock grazing.
- Major capital programs in the Umatilla and Yakima subbasins improved passage at all major irrigation diversions with state-of-the-art screens and ladders.
- Developed screen fabrication shops in Idaho, Washington and Oregon and provided cost-sharing funds to screen numerous smaller diversions.
- Funded wildlife mitigation agreements with Montana, Nez Perce Tribe and Washington which are protecting and/or enhancing wildlife habitat.
- Purchased and/or enhanced numerous tracts benefiting wildlife and in many cases resident and anadromous fish.

Production Construction

- Planned, designed and constructed artificial production and adult collection and juvenile release facilities (i.e., Umatilla, Yakima, Nez Perce Tribal, and Walla Walla Hatcheries) to supplement salmon populations in the Umatilla, Yakima, and Clearwater subbasins.
- Developed supplementation program for the Hood subbasin, including improvements at the existing Oak Springs and Pelton/Round Butte facilities and new collection/release facilities in the subbasin.
- Planned for hatchery and acclimation facilities to augment production in the Grande Ronde and Imnaha subbasins (Northeast Oregon Hatchery).
- Retro-fitted the Bonneville Hatchery to serve as a captive brood stock facility for Grande Ronde salmon populations.
- Developed low-tech facilities for the Salmon River production program.
- Constructed resident fish mitigation hatcheries on the Colville Reservation (Colville Tribal Hatchery), Clark Fork (Cabinet Gorge Hatchery), Spokane Reservation (Galbraith Springs and Sherman Creek facilities), Northeastern Washington (Kalispel Tribal Bass Hatchery), Flathead area (Creston Hatchery).
- Continued development of artificial production facilities to propagate endangered Kootenai River white sturgeon.
- Developed resident fish hatchery capability (Shoshone-Bannock and Shoshone-Paiute Culture Facility) and the Duck Valley fish stocking program including Billy Shaw Reservoir.

Research and Monitoring

- Funded major research efforts on:
  - salmon diseases (including construction of OSU fish disease lab);
  - improved hatchery diets and culture; supplementation methods (e.g., NATURES) and effects on wild salmon;
  - development of the PIT fish tag;
  - conducted flow volume-survival correlations;
  - tested oxygen-supplemented hatchery rearing;
  - conducted production/captive brood stock research for ESA-listed species;
  - developed technical criteria for tributary screens;
  - developed genetic evaluation technology;
  - examined wild salmon smolt physiology;
  - studied dissolved-gas effects and trauma, known-stock terminal fisheries, and other questions.

- Important on-going monitoring efforts include:
  - the Smolt Monitoring Program;
  - monitoring BPA-funded hatchery production through coded-wire tags;
  - Lake Roosevelt resident fish monitoring program; and,
  - monitoring the effectiveness of tributary passage facilities.

- Funded several modeling and methods development programs including:
  - System Planning Model;
  - Wildlife Losses Assessments;
  - CRISP, FLUSH, PATH and other modelling efforts;
  - Regional Assessment of Supplementation Projects;
  - Integrated Hatchery Operations Team;
  - Integrated Rule Curves for reservoir level management; and,
  - PNW Fish Health Protection Policy development.

Operation and Maintenance

- Provided funds to operate and maintain habitat improvements, tributary passage facilities and hatchery/adult collection/acclimation facilities.
- On-going efforts to improve out-migrating salmon survival by reducing numbers of predators in the Columbia mainstem.
- Efforts to improve adult salmon survival through increased law enforcement.

Coordination/Administration

- Funded BPA Division of Fish and Wildlife and the CBFWA. (NPPC is funded from the Reimbursable Budget.)
- Funded independent scientific review of the fish and wildlife program since 1988 through the Scientific Review Group, Independent Scientific Group, Independent Scientific Advisory Board, and Independent Scientific Review Panel.

Systemwide

The following table lists the past accomplishments of the systemwide projects recommended for FY 2000 funding. The identified accomplishments are those put forward by the project sponsors in their FY 2000 proposals.

1. Set management goals, objectives and strategies and coordinate planning and implementation.

8906200	Fish and Wildlife Program Implementation	Columbia Basin Fish & Wildlife Authority
	See reference list.	

9803100	Implement Wy-Kan-Ush-Mi Wa-Kish-Wit Watershed Assessment & Restoration Plan	Columbia River Inter-Tribal Fish Commission

1998	Coordinated Inter-Tribal watershed projects development and reviews prior to submission to Watershed Technical Work Group, CBFWA, NPPC, & BPA. Tribes agreed to establish an Inter-Tribal Habitat team to coordinate watershed projects & assessments.
1998	Promoted the development of habitat projects consistent with Wy-Kan-Ush-Mi Wa-Kish-Wit and ongoing & proposed salmon production actions
1998	Organized Inter-Tribal Habitat & Production project review workshops to analyze assessments, implementation, evaluations, & results.
1998	Organized meetings with Oregon GWEB, DEQ, federal NRCS - Conservation Reserve Program, EPA Clean Water Action Plan, BOR, and USFWS with Inter-Tribal watershed restoration project staff to seek cooperative, cost-share funding of projects for 1999-2001
1998	Developed a draft Tribal Watershed Restoration Handbook to guide habitat protection & restoration work by tribes, and public & private partners. Developed draft public education fact sheets on the progress of habitat & production projects in 4 subbasins.

2. Provide a peer review capability.

8907201	Independent Scientific Advisory Board Support	Department of Energy/Oak Ridge National Laboratory

1996	Review of the FWP. NPPC Report 96-6 by the Independent Scientific Group: Return to the River.
1997	Participated in 8 reviews requested by NMFS and the Council including reviews of downstream passage for salmon, PIT Tag research, NMFS Waiver of Dissolved Gas Standard, ecological impacts of BiOp flow provisions on Hungry Horse and Libby resident fishes.
1998	Participated in 8 Reviews requested by NMFS, the Council, and Congress including review of the Corps Capital Construction Program, PIT tag workplan, and the Multi-Species Framework Scientific Principles.

9600500	Independent Scientific Advisory Board	Columbia Basin Fish & Wildlife Foundation

1996	Review of the FWP. NPPC Report 96-6 by the Independent Scientific Group: Return to the River.
1997	Completion of 8 Reviews requested by NMFS and the Council including reviews of downstream passage for salmon, PIT Tag research, NMFS Waiver of Dissolved Gas Standard, ecological impacts of BiOp flow provisions on Hungry Horse and Libby resident fishes.
1998	Completion of 8 Reviews requested by NMFS, the Council, and Congress including review of the Corps Capital Construction Program, PIT tag workplan, and the Multi-Species Framework Scientific Principles.

3. Conduct regional research and monitor progress and results.

8740100	Assessment of Smolt Condition: Biological and Environmental Interactions	U.S. Geological Survey, Biological Resources Division,

1998	Obj.1 & 2. hatchery evaluation in progress

1998 Obj. 3. results of lysozyme research reported
1998 Obj 4. provided technical assistance to 2 USFWS, 2 USGS, 1 COE, and 4 WDFW smolt monitoring projects
1998 Assessment of Smolt Condition for Travel Time Analysis: Project Review 1987-1997
1998 Developed cooperative project with USFWS, Idaho Fishery Resource Office under Obj 4.
1998 Sponsor 20th Smolt Workshop in cooperation with WDFW, scheduled Feb 1-3, 1999 Olympia, Washington
1997 Hatchery rearing conditions survey completed for 10 hatcheries
1997 Smolt condition assessment technical assistance to 15 projects, including to 3 USFWS, 2 USGS, 2 COE, 4 WDFW
1997 Cooperative research with USFWS to determine effects of enhanced feeds on growth and disease resistance in chinook salmon
1996 Cooperative research with USFWS to enhance smolt performance with glucan feeds, continued monitoring for FPC
1995 Conducted cooperative research with USFWS, continued monitoring for FPC
1995 Conducted gas bubble monitoring of juvenile salmon at 6 dams on the Snake and Columbia Rivers, continued monitoring for FPC
1994 Sampling with NMFS Lower Granite Survival Study continued from 1993, continued monitoring for FPC

9005200	Performance/Stock Productivity Impacts of Hatchery Supplementation	U.S. Geological Survey, Biological Resources Division

1995 Publication: Reisenbichler, R.R., and G.S. Brown. 1995. Is Genetic Change From Hatchery Rearing of Anadromous Fish Really a Problem? Pages 578-579 in H.L. Schramm, Jr., & R.G. Piper [eds] Uses and Effects of Cultured Fishes in Aquatic Ecosystems. America
1996 Publication: Reisenbichler, R.R. 1996. Effects of supplementation with hatchery fish on carrying capacity and productivity of naturally spawning populations of steelhead. Pages 81-92 in G.E. Johnson, D.A. Neitzel, and W.V. Mavros [eds.] Proceedings from
1997 Publication: Reisenbichler, R.R.. 1997. Genetic factors contributing to declines of anadromous salmonids in the Pacific Northwest. Pages 223-244 in D.J. Stouder, P.A. Bisson, and R. J. Naiman [eds.] Pacific Salmon and Their Ecosystems: Status and Future
1998 Reisenbichler, R.R. 1998. Questions and partial answers about supplementation--genetic differences between hatchery and wild fish. Pages 29-38 In E.L. Brannon and W.C. Kinsel [eds] Proceedings of the Columbia River anadromous salmonid rehabilitation and p
1998 Publication in review: Reisenbichler, R.R., and S.P. Rubin. Genetic changes from artificial propagation of Pacific salmon affect the productivity and viability of supplemented populations. ICES Journal of Marine Science.

9009300	Genetic Analysis of Oncorhynchus Nerka (Modified to Include Chinook Salmon)	University of Idaho

1997 Identification of a listed sockeye in creel samples and straying sockeye at Manchester
1998 Completion of mitochondrial DNA data set for sockeye
1999 Completion of preliminary nuclear DNA data set for sockeye.
See project history Section 8d for further detail between 1990-1995.

9305600	Assessment of Captive Broodstock Technology	National Marine Fisheries Service

1994 Compared reproductive performance of sockeye salmon reared in either fresh or salt water.
1994 Compared effectiveness of biodegradable and non-biodegradable GnRH implants for induction of ovulation and spermiation in sockeye salmon
1993 Examined the relationship between body fat levels and early male maturity in spring chinook salmon
1995 Examined independent and interactive effects of growth rate and body fat levels on onset of maturity in male spring chinook salmon
1997 Examine relationship between growth rate or ration level on onset of age of maturity in male spring chinook salmon
1994 Determine critical period of olfactory imprinting in sockeye and spring chinook salmon
1994 Tested improved broodstock diets for sockeye salmon

1995 Tested various dietary lipid levels for effects on reproductive performance in sockeye salmon
1996 Developed/validated bio-encapsulation procedures to deliver antibiotics to first feeding salmon fry
1995 Tested live food diets for sockeye salmon fry
1996 Evaluated reproductive behavior of chinook salmon in artificial spawning stream
1995 Compared reproductive success of captively reared and sea ranched coho salmon
1994 Determined effects of rearing sockeye salmon at either 8 or 12 C on growth, age of maturity, smoltification and gamete quality
1994 Development of methods to measure the nonspecific immune functions of salmonids
1994 Measurement of cellular immune functions of sockeye salmon throughout their entire life cycle.
1994 Quantification of the effect of rearing temperature on the ability of sockeye salmon to produce antibody response.
1994 Quantification of the effect of smoltification of sockeye salmon on immune functions which are important for disease resistance.
1997 Quantification of effects of growth rate on immune functions of chinook salmon.
1997 Test azithromycin for reducing mortality due to BKD in sockeye salmon
1998 Test azithromycin for reducing mortality due to BKD in sockeye salmon
1998 Examine mate preference in chinook salmon
1994 Established quantitative genetic experimental design
1995 Released to sea 257,000 fish marked with family specific coded wire tags
1998 Completed genetic analysis of juvenile body morphometry in base population
1998 Cultured 2-. 3-, and 4-year old PIT tagged fish from the same cohort to maturity
1998 Established experimentally inbred (1 generation, 2 levels of inbreeding) and control lines of progeny

9402600	Pacific Lamprey Research and Restoration	Confederated Tribes of the Umatilla Indian Reservation

1995 Status report of lamprey in Columbia Basin.
1996 Assessment of radio tag use for lamprey.
1998 Completed sampling for Columbia Basin lamprey genetic database.
1998 Began development of Umatilla Basin lamprey restoration plan.
1998 Assessment of past and current lamprey abundance in NE Oregon subbasins.
1998 Completed a Cultural Resource Survey

9800800	Regional Forum Facilitation Services	DS Consulting

1998 Facilitated all Regional Forum teams beginning in June 1998
1998 Facilitated resolution of issues at team level
1998 Reduced number of issues raised to IT for resolution from technical teams
1998 Improved decision making on mainstem hydroelectric issues

4. Develop tools and models needed to enhance decision-making ability.

9105500	N A T U R E S [Formerly Supplemental Fish Quality (Yakima)]	National Marine Fisheries Service

1992 Completed Literature Review.
1992 On a laboratory scale demonstrated that full term rearing of fall chinook salmon in semi-natural raceway habitat increases instream post release survival.
1994 On a laboratory scale demonstrated that acclimation rearing of spring chinook salmon in semi-natural raceway habitat increases instream post release survival.
1994 On a pilot scale demonstrated that full term rearing of fall chinook salmon in semi-natural raceway habitat increases instream post release survival.
1997 Completed design and physical evaluation of semi-natural raceway habitat using resin rock pavers for production scale raceways.
1998 On a production scale demonstrated that full term rearing of fall chinook salmon in semi-natural raceway habitat with resin rock paved substrate increases instream survival.
1995 Completed design and physical evaluation of automatic subsurface feed delivery system.

1995 On a pilot scale demonstrated that automatic subsurface feed delivery systems do not affect fall chinook salmon behavior.
1992 With laboratory trials demonstrated that live food supplemented diets improve fall chinook salmon foraging success.
1997 With field trials demonstrated live food diets improve fall chinook salmon foraging success.
1998 Completed design of an oval exercise system that can be retrofitted to production raceways to exercise fish in a cost-effective manner.
1997 Demonstrated chinook salmon instream post-release survival is increased by being exposed to a diverse array of live predators during culture pilot scale raceways.
1997 Demonstrated chinook salmon can be conditioned to respond to the scent of a predator.

5. Manage information (maintain and disseminate data) and report results to constituents and stakeholders.

8810804	StreamNet: the Northwest Aquatic Information System	Pacific States Marine Fisheries Commission

1998 StreamNet successfully added recent and/or current year data to all anadromous fish escapement trends.
1998 StreamNet released the initial version of an Internet-based, Basin-wide project tracking system and made significant progress toward establishment of multi-agency data exchange standards for compiling enhancement project data.
1998 StreamNet prepared and updated an online version of the annual FWP AIWP process. The product has proven to be extremely useful to FWP managers and decision makers.
1998 StreamNet completed a first-ever regionally consistent hydrographic data layer, established lat-long identification protocol, and populated the system with regionally consistent anadromous fish distribution and use type data.
1998 StreamNet produced a comprehensive online data query system that provides custom, user-defined remote access to all StreamNet data.
1998 StreamNet produced a major update to its regional data exchange formats document, including new entries for project tracking and fish distribution. Significant improvements were also made to geographic location standards.

9800401	Electronic Fish and Wildlife Newsletter	Intermountain Communications

1998 provided weekly, objective information related to fish & wildlife policymaking in the Columbia R. Basin using e-mail delivery system
1999 delivering same service and established reputation as information source fair to all interests increased subscriber circulation

Lower Columbia Mainstem Subbasin

9306000	Select Area Fishery Evaluation Project	Oregon Department of Fish and Wildlife

1994 Categorized, ranked and selected potential sites for further study.
1994 Established water quality monitoring programs at each selected site.
1995 Implemented coho rearing and release activities at three selected sites (Tongue Point, Blind Slough and Deep River) and expanded existing Youngs Bay production.
1996 Established fall salmon harvest opportunities in the three new selected areas and Youngs Bay in 1996, 1997, and 1998.
1996 Attained expected survival advantage from select area releases of coho.
1995 Implemented fall chinook rearing and release activity in Youngs Bay.
1995 Implemented spring chinook rearing and release activities in the three new sites and Youngs Bay.
1997 Established spring chinook harvest opportunities in Youngs Bay, Blind Slough and Tongue Point.

9902500	Lower Columbia River Wetlands Restoration and Evaluation Program	U.S. Forest Service, Columbia River Gorge National Scenic Area

1997	Installed water control structures
1998	Developed baseline data, strategies
1999	Disked 200 acres, began monitoring

9902600	Sandy River Delta Riparian Reforestation	U.S. Forest Service, Columbia River Gorge National Scenic Area

1997	Restored three aces riparian forest
1998	Project was recommended for FY1999 BPA wildlife funds. Site preparation and interim management began. Vegetation planting initiated. Partnerships developed.
1998	Proposal was submitted for FY2000 BPA wildlife funds. Proposal recommended by the CBFWA Wildlife Caucus. Habitat management plan completed.
1998	Restored eight acres riparian forest
1999	Planned restoration of 50 acres
1993	The Oregon Trust Agreement Planning Project was completed – a list of 287 potential wildlife mitigation sites throughout Oregon was created and costs to fully mitigate for Oregon's losses were estimated.
1997	The Assessing Oregon Trust Agreement Planning Project Using Gap Analysis was completed – potential mitigation sites throughout Oregon were re-evaluated and prioritized using Gap Analysis techniques.
1998	The Oregon Wildlife Coalition developed and submitted a programmatic project proposal for FY1999 funds – explained intent for mitigation planning, coordination, and implementation by Oregon wildlife managers within Oregon. Identified priority projects for FY1999 with specific budgets to help meet wildlife mitigation objectives.

Lower Columbia Wetlands Restoration (Project No. 9902500)

1998	Project was recommended for FY1999 BPA wildlife funds. Site preparation and interim management began. Hydrological studies conducted. Partnerships developed.
1999	Proposal was submitted for FY2000 BPA wildlife funds. Proposal recommended by the CBFWA Wildlife Caucus. Habitat management completed.

Willamette Subbasin

20550	Willamette Basin Mitigation Program Umbrella	Oregon Department of Fish and Wildlife

See individual project proposals

8816000	Willamette Hatchery Oxygen Supplementation	Oregon Department of Fish and Wildlife

1989	Completion of hatchery modifications
1994	Completion of 4 experimental rearing years
1995	Through 1998: Analysis of water quality data

9405300	Bull Trout Assessment - Willamette/McKenzie	Oregon Department of Fish and Wildlife

1996	Over 100 miles of stream have been surveyed for presence of bull trout. Young of the year bull trout have only been found in known spawning tributaries.
1998	Redd surveys conducted in Anderson and Olallie creeks and the mainstem McKenzie show an increasing trend in adult bull trout abundance.
1998	With a downstream migrant trap, we monitored of timing and numbers of juveniles moving downstream in Anderson Creek. Data indicates good spawning success; however, habitat for young of the year bull trout may be limited.
1998	Monitoring of radio transmitters implanted in bull trout has allowed us to describe seasonal movements and habitat use in mainstem McKenzie, South Fork McKenzie, and Cougar Reservoir.
1997	Information collected on this project has allowed ODFW to complete a risk assessment, rehabilitation plan and monitoring program for bull trout in the Middle Fork Willamette River.

9107800	Burlington Bottoms Wildlife Mitigation	Oregon Department of Fish and Wildlife

1993	Completed habitat evaluation procedures (HEP). Completed hydrology and hydraulics assessment project.
1994	Completed EA/Management Plan, including NEPA work.
1995	Initiated survey and monitoring efforts for target and other wildlife species, including Federal and State listed species. Studies are on going and will continue indefinitely with the assistance of volunteers.
1996	Maintained wildlife habitat values for target wildlife species through removal of invasive non-native plant species.
1997	Maintained and/or enhanced wildlife habitat values for target species through removal of non-native plant species and planting of native plant species.
1998	Maintained and/or enhanced wildlife habitat values for target species through non-native plant removal and planting of native plant species.
1998	Continued survey and monitoring efforts for target and other wildlife including one Federal listed (Bald Eagle) and three State listed (red-legged frog, western painted and pond turtles) species.

9206800	Implement Willamette Basin Mitigation Program	Oregon Department of Fish and Wildlife

1993	Inventory western pond turtle population in confluence area
	Produced final report
1994	Inventory western pond turtle population in remaining Willamette basin habitats
	Produced final report including draft conservation strategy
1995	Radio telemetry of local confluence turtle population
	Background information and inventory of potential mitigation sites
1996	Graduate project completed assembling one year of turtle telemetry and habitat data
	Radio telemetry of turtle population continuation
	Begin development of partnerships on public lands
1997	GIS developed and Atlas of GIS data produced
	Graduate project completed assembling two years of overwintering, nesting and population data
	Graduate project producing hydrologic analysis report
	HEP sampling and report finalized
	Alternative Team report finalized
1998	Purchase of 44 acre riparian forest and farm land
	Identified two new focus areas in the basin
	New partnerships developed with McKenzie River Trust and Watershed Council
	HEP and NEPA surveys completed on 44 acre parcel
1999	Technical Advisory Group formed
	Photo point monitoring sites were selected
	Removal of non-native vegetation
	Site specific Hydrologic and topographic surveys
	Begin revegetation of field on 44-acre parcel
	Finalize Pre-settlement Willamette Valley Vegetation Map
	Index to Willamette basin habitats based on hydro geomorphology

9607000	McKenzie River Focus Watershed Coordination	McKenzie Watershed Council

1996	Completed Technical Report for Water Quality and Fish & Wildlife Habitat
	Completed Action Plan for Water Quality and Fish & Wildlife Habitat
	Implemented ambient water-quality monitoring
1997	Initiated collaboration with Spring Chinook Working Group and began communicating with Upper Willamette Bull Trout Working Group to address critical fish habitat issues
	Initiated collaboration with Habitat Conservation and Land Acquisition Working Group to plan and implement habitat acquisitions
	Convened Watershed Health Forum, which encouraged information sharing among scientists, natural resource managers, and the public
1998	Implemented storm event monitoring
	Implemented macroinvertebrate monitoring

	Council Coordinator selected as board member of the Willamette Basin Restoration Initiative, to represent Willamette Basin watershed councils	
20128	Riparian Restoration and Enhancement Planning for Multnomah Channel	Metropolitan Service District of Oregon
1998	Planted riparian tree assemblage on 24 acres (approx. 0.7 mi. river/streambank)	
1998	Conceptual design for flow control structures	

Hood Subbasin

20513	Hood River / Fifteenmile Creek Umbrella	Oregon Department of Fish and Wildlife
1986	The physical stream survey of the Fifteenmile Creek subbasin was completed.	
1987	The Fifteenmile Creek Basin Fish Habitat Improvement Implementation Plan (Smith et al. 1987) was completed.	
1994	Winter steelhead broodstock first collected at Powerdale Dam (Hood River).	
1994	Spring chinook salmon collected at Pelton Trap for Hood River smolt production	
1995	Construction of rearing cells in the Pelton Fish Ladder completed.	
1995	Physical stream inventories of anadromous salmonid bearing streams located on all private and selected USFS lands in Hood subbasin completed.	
1996	Completed development of winter steelhead acclimation facility on the East Fork Hood River.	
1996	Completed development of the West Fork Hood River smolt acclimation site.	
1996	Powerdale Trapping Facility completed.	
1996	Genetic analysis of fish from different portions of the Hood River subbasin will be completed.	
1997	Collection of Hood River summer steelhead stock began at Powerdale Dam	
1997	Hood River Production Program EIS completed	
1997	Determination of spacial distribution for anadromous adult holding and spawning was completed in 1997.	
1997	Rearing density estimates for indigenous fish populations in the Hood River subbasin were made for selected sites from 1994-97.	
1997	130 cfs East Fork Irrigation District diversion was equipped with fish screens.	
1998	Hood River smolt migration has been monitored from 1994 - 98.	
1998	Parkdale Fish Facility completed and operational	
1998	Oak Springs Hatchery - addition to hatchery building completed, including isolation incubation and early rearing. New raceways and water supply nearing completion - will be completed for spring 99 rearing.	
1998	Round Butte Hatchery / Pelton Ladder - 125,000 spring chinook reared to smolt stage and released into Hood River acclimation ponds.	
1998	Selected, high priority, Hood River subbasin fish habitat has been protected and/or restored.	
1998	Hood sport angler harvest has been monitored since 1996.	
1998	Biological data has been collected from all salmonids trapped at the Powerdale Dam since 1991.	
1998	Riparian habitat along Fifteenmile Creek subbasin streams have been protected to speed vegetative recovery.	
1998	Fifteenmile Creek subbasin instream habitat was improved by installing in-stream structures.	
1998	Off site livestock watering developments have been constructed to reduce livestock grazing of riparian habitat in the Fifteenmile Creek subbasin.	
1998	Fish habitat improvements on private lands in the Fifteenmile Creek subbasin have been maintained from 1987 - 1998.	
1998	1998 steelhead smolt migration estimates were made for the Fifteenmile Creek subbasin.	
8805304	Hood River Production Program - ODFW M&E	Oregon Department of Fish and Wildlife
1997	Completed Environmental Impact Statement (EIS) for the Hood River Production Program (HRPP).	
1996	Completed physical inventory of all anadromous salmonid bearing streams located on private lands and selected USFS lands in the Hood River subbasin.	
1998	Estimated age specific wild steelhead and spring chinook salmon smolt production from the Hood River subbasin for the years 1994-98.	

1998	Estimated the number of hatchery summer and winter steelhead smolts leaving the Hood River subbasin from the 1993-97 brood releases.	
1998	Estimated jack and adult anadromous salmonid sport harvest in the Hood River subbasin for the years 1996-98.	
1998	Estimated age specific jack and adult anadromous salmonid escapements to Powerdale Dam for the years 1992-98.	
1996	Determined spatial distribution of summer and winter steelhead, spring and fall chinook salmon, and coho salmon populations in the Hood River subbasin.	
1998	Determined the temporal distribution of the summer and winter steelhead and spring and fall chinook salmon runs to the Hood River subbasin.	
1998	Collected whole fish and tissue samples from wild and hatchery steelhead and resident rainbow and cutthroat trout from 1994-1997 in the Hood River subbasin.	
1998	Monitored stream flows at selected sites in the Hood River subbasin from 1992-98	
9802100	Hood River Fish Habitat Project	Confederated Tribes of the Warm Springs Reservation of Oregon
1996	Completed .5 miles of riparian livestock exclosure fencing on Neal Creek (Kirby property).	
1996	Completed 75 feet of bioengineered rip rap, which included vegetative plantings, on Neal Creek (Kirby property).	
1998	Completed 1.2 miles of riparian livestock exclosure fencing on Neal Creek (Guisto & Meyers property).	
1998	Completed 75 feet of bioengineered rip rap, which included vegetative plantings, on Neal Creek (Guisto property).	
1998	Planted 130 ponderosa pine conifer seedlings on Neal Creek (Kirby property).	
1998	Removed a portion of the Tony Creek Dee Mill diversion concrete apron.	
1998	Completed a preliminary feasibility evaluation for East Fork Irrigation District in developing a NMFS approved diversion and screen or pipe bypass system on Neal Creek.	
1999	Completed 100 feet of bioengineered rip rap, which included vegetative plantings, on Neal Creek (Meyers property) [In progress].	
1999	Eliminated the lower Evans Creek irrigation diversion (Higgins pond) by constructing a gravity pressure pipe system [In progress].	
8805303	Hood River Production Program - M&E	Confederated Tribes of the Warm Springs Reservation of Oregon
1995	Completed physical stream inventories of anadromous salmonid bearing streams located on all private and selected USFS lands in the Hood River subbasin.	
1995	Completed construction of rearing cells in Pelton Ladder.	
1996	Completed development of the winter steelhead acclimation facility on the East Fork Hood River.	
1996	Completed development of the West Fork Hood River spring chinook salmon acclimation sites (portable acclimation ponds with gravity fed pipe system).	
1996	Powerdale Trapping Facility completed.	
1996	Determined what subspecies of O. mykiss and O. clarki exist in the subbasin and if there are any sensitive gene pools that may be impacted by HRPP actions.	
1996	Completed a radio telemetry study to assess the upstream migration of adult salmonids in the lower Hood River (Rm 0.0-4.0).	
1997	Hood River Production Program EIS completed.	
1997	Determination of spatial distribution for anadromous adult holding and spawning was completed in 1997	
1997	Rearing density estimates for indigenous fish populations in the Hood River subbasin were made for selected sites from 1994-1997.	
1997	The East Fork Irrigation District 130 cfs diversion on the East Fork Hood River was equipped with fish screens.	
1998	Spring chinook salmon spawning ground surveys on the West Fork Hood River were completed from 1997-1998.	
1998	Parkdale Fish Facility completed and operational.	
8902900	Hood River Production Program-Pelton Ladder-Hatchery	Oregon Department of Fish and Wildlife
1996	Converted a portion of Pelton Ladder into rearing cells for Hood River spring chinook.	
1993	Initiated releases of Deschutes stock spring chinook in the Hood River subbasin.	

1997 Hood River Production Program EIS completed.
1997 Spring chinook brood collected from adults and jacks returning to Powerdale Dam.

9301900	Powerdale, Parkdale, and Oak Springs O&M	Oregon Department of Fish and Wildlife

1994 Collected first Hood River native winter steelhead broodstock at Powerdale Trap.
1996 began releases of Deschutes stock spring chinook in Hood River subbasin.
1996 Powerdale Trapping Facility completed.
1997 Collected first Hood River native summer steelhead broodstock at Powerdale Trap
1997 Hood River Production Program EIS completed.
1998 Parkdale Fish Facility completed and operational.
1998 Oak Springs Hatchery - addition to hatchery building completed, including isolation/incubation and early rearing. New raceways and water supply nearing completion - will be completed for spring, 1999 rearing.

Wildlife

92-84	The Oregon Trust Agreement Planning Project

1992 Initiated to identify potential mitigation sites through Oregon and to estimate costs for fully mitigation Oregon wildlife losses.
1993 Completed project identified 287 potential wildlife mitigation sites throughout Oregon. Estimated costs for full mitigation averaged $250 million.

95-65	Assessing Oregon Trust Agreement Planning Project Using Gap Analysis: Potential mitigation impacts for the impacts to Oregon wildlife resources associated with relevant mainstem Columbia River and Willamette River hydroelectric projects

1995 Project initiated to re-evaluate and prioritize potential mitigation sites throughout Oregon.
1997 Draft results provided prioritized list of mitigation sites.

9705900	Securing Wildlife Mitigation Sites – Oregon

1998 The Oregon Wildlife Coalition developed and submitted a programmatic project proposal for FY1999 funds. This proposal explained intent for mitigation planning, coordination, and implementation by Oregon wildlife managers within Oregon and identified priority projects for FY1999 with specific budgets to help meet wildlife mitigation objectives.
1998 Project was recommended by the NPPC for $4 million.
1998 Efforts to implement individual mitigation projects occurred.

Wind Subbasin

9801900	Wind River Watershed Restoration	Underwood Conservation District

1998 (Coordination) Facilitated monthly meetings of the Wind River Action Committee (AC) to develop a common mission and goals of watershed stakeholders.
1998 (Coordination) Facilitated meetings of the Technical Advisory Committee to provide technical support to the AC and design restoration projects.
1998 (Monitoring) Monitored juvenile steelhead populations.
1998 (Monitoring) Monitored steelhead smolts.
1998 (Monitoring) Monitored steelhead adults.
1998 (Monitoring) Evaluated spawning gravel composition in the Wind River watershed.
1998 (Assessment)
1998 (Restoration) Restored 1500 linear feet of degraded stream at Stabler Cut Bank Project.
1998 (Restoration) Decommissioned 4.4 miles of road in Dry Creek basin
1998 (Education) Formed Stevenson High School stream monitoring program
1998 (Education) Supported Wind River Middle School's environmental education program.

Fifteenmile Subbasin

9304001	Fifteenmile Creek Wild Steelhead Smolt Production	Oregon Department of Fish and Wildlife
1988	Estimated subbasin wild winter steelhead and spring chinook salmon smolt production. Project was funded by the U.S. Fish and Wildlife Service.	
9304000	Fifteenmile Creek Habitat Restoration Project (Request Multi-Year Funding)	Oregon Department of Fish and Wildlife
1998	To date, constructed approximately 100 - miles of riparian protection fence	
1998	To date, inspected & maintained 100 miles of riparian protection fence	
1998	To date, constructed and maintained approximately 1000 instream fish habitat structures	
1998	To date, eliminated 3 high maintenance water gaps by providing off- site water for livestock using solar pumping stations	
1998	To date, monitored stream temperatures at 10 locations throughout the basin from April through November	
1998	To date, provided photographic documentation at 41 established photopoint location throughout the basin	
1998	To date, coordinated field activities with other organizations, agencies, and landowners to insure maximum technology transfer	
1998	Make, presentations related to the Fifteenmile Creek Habitat Restoration project	
1998	To date, continued to pursue outside funding (non-BPA) and grants to expand the Fifteenmile Creek Habitat Restoration Project	

Wildlife

92-84	The Oregon Trust Agreement Planning Project	
1992	Initiated to identify potential mitigation sites through Oregon and to estimate costs for fully mitigation Oregon wildlife losses.	
1993	Completed project identified 287 potential wildlife mitigation sites throughout Oregon. Estimated costs for full mitigation averaged $250 million.	
95-65	Assessing Oregon Trust Agreement Planning Project Using Gap Analysis: Potential mitigation impacts for the impacts to Oregon wildlife resources associated with relevant mainstem Columbia River and Willamette River hydroelectric projects.	
1995	Project initiated to re-evaluate and prioritize potential mitigation sites throughout Oregon.	
1997	Draft results provided prioritized list of mitigation sites.	
9705900	Securing Wildlife Mitigation Sites – Oregon	
1998	The Oregon Wildlife Coalition developed and submitted a programmatic project proposal for FY1999 funds. This proposal explained intent for mitigation planning, coordination, and implementation by Oregon wildlife managers within Oregon and identified priority projects for FY1999 with specific budgets to help meet wildlife mitigation objectives.	
1998	Project was recommended by the NPPC for $4 million.	
1997	Efforts to implement individual mitigation projects occurred.	

Klickitat Subbasin

9705600	Lower Klickitat River Riparian & In-Channel Habitat Enhancement Project	Yakama Indian Nation
1997	August 97 - Project Initiation, gathered community support through local meetings,	
1997	Construct two Sediment Retention Ponds	
1997	Installed eight miles of riparian fence. TFW Habitat survey of Swale Creek.	
1997	Conducted six miles of Timber Fish and Wildlife (TFW) Habitat survey of Swale Creek.	

1998	Completion of Biological Opinion for five additional ponds and in-channel construction. Obtained permits for all construction work.
1998	Construction of five sediment ponds, on intermittent tributaries of Swale Creek, which deliver sediment laden waters directly to Swale Creek.
1998	Installed off-channel watering system, which will allow for the elimination of high density sheep wintering operation within intermittent tributary of Swale Creek.
1998	Installed seven miles of riparian fence.
1998	Revegetation of all sediment retention ponds and within portions of riparian exclosures.

9902400	Bull Trout Population Assessment In The Columbia River Gorge, WA	WDFW
9506800	Klickitat Passage/Habitat Improvement M&E	Yakama Indian Nation

Deschutes Subbasin

9500700	Hood River Production Program - PGE: O&M	Portland General Electric - ENRON
1995	Program fully developed	
1996	Program at full production	
1998	Program on going	
9405400	Bull Trout Genetics, Habitat Needs, Life History, etc. in Central and NE Oregon	Oregon Department of Fish and Wildlife, CTWSRO
1996	Completed sampling and DNA analysis of 46 populations of bull trout in Oregon, Washington and Idaho to describe genetic structure of bull trout populations.	
1997	Conducted distribution and habitat surveys of 17 streams with sympatric populations of bull trout and brook trout (began in 1996)	
1998	Completed fieldwork portion of enclosure study of bull trout/brook trout interactions, growth and feeding behavior	
1997	Conducted radio telemetry study of movements and habitat use of bull trout juveniles and adults	
1998	Conducted radio telemetry study of movements and habitat use of bull trout juveniles and adults	
1996	Collected summer temperature data from streams containing bull trout and brook trout	
1997	Collected summer temperature data from streams containing bull trout and brook trout	
1998	Collected of summer temperature data from streams containing bull trout and brook trout (ongoing)	
1998	Conducted adult and juvenile movement studies in upper John Day and Walla Walla subbasins(ongoing)	
1996	Completed multiple pass spawning surveys of 3 streams, 3 exploratory surveys	
1997	Completed multiple pass spawning surveys of 3 streams, 2 exploratory surveys	
1998	Completed multiple pass spawning surveys of 3 streams, spawner population estimate of 1 stream, 1 exploratory survey (ongoing)	
1998	Completed thermal videography of Wenaha River (Grande Ronde subbasin)	
1997	Completed statewide bull trout distribution maps (entered into GIS system)	
1997	Made two presentations at the annual meeting of the Oregon Chapter, American Fisheries Society	
1998	Made two presentations at the annual meeting of the Oregon Chapter, American Fisheries Society	
1998	Made two presentations at the annual *Salvelinus confluentus* Curiosity Society workshop	
1998	Made two presentations at the special bull trout meeting of the North Pacific International Chapter, American Fisheries Society	
20511	Deschutes River Umbrella Proposal	Oregon Department of Fish and Wildlife
1998	132 miles of riparian livestock exclosure fencing built and maintained on Trout Creek	
1998	Trout Creek smolt emigration monitored	
1998	236 in-stream rock weirs built and maintained in Trout Creek and tributaries	
1998	189 log weirs placed and maintained in Trout Creek and tributaries	
1998	3.7 miles of juniper riprap placed and maintained in Trout Creek and tributaries	
1998	3,397 in-stream boulders placed and maintained in Trout Creek and tributaries	
1998	498 pieces of large wood placed and maintained in Trout Creek and tributaries	

1998	Developed and maintained six upland Trout Creek livestock watering sites	
1998	Facilitated Corps of Engineer initial assessment for removal of 1964 Trout Creek berms	
1998	Trout Creek basin habitat survey completed	
1998	Bull trout population inventories conducted on the Metolius and Deschutes rivers	
9404200	Trout Creek Habitat Restoration Project Multi Year Funding Proposal	Oregon Department of Fish and Wildlife
1998	To date we have built and maintained 132 miles of fence	
1998	conducted SSt smolt monitoring	
1998	To date we have built and maintained 236 Rock weirs.	
1998	To date we have built and maintained 189 log weirs.	
1998	To date we have placed and maintain 3.7 miles of Juniper riprap.	
1998	To date we have placed 3397 habitat boulders.	
1998	To date we have placed 498 pieces of LWD.	
1998	Facilitated COE to conduct an initial assessment to removal of 1964 berms in the basin.	
1998	Facilitated and completed basin habitat survey.	
1998	Developed and maintain 6 off channel water developments	
20070	Water Conservation and Stream Enhancement Project	Tumalo Irrigation District
1997	Piped 3,200 feet of the Tumalo Feed Canal, reducing losses by an estimated 20 CFS. The project also enhanced flows in Tumalo Creek for approximately 9 miles by relocating the diversion of irrigation waters downstream.	
9802400	Monitor Watershed Condition on the Warm Springs Reservation	Confederated Tribes of the Warm Springs Reservation of Oregon
1981	Phase I, (1981 -1982) Compile and analyze physical and biological data on anadromous fish streams,	
1983	Phase II, (1983-1989) Estimate natural production under current habitat conditions and design enhancement projects.	
1984	Phase III (1984-1991) Implement, Monitor and evaluate enhancement measures identified in Phase II.	
1996	Early Action Watershed Project, 1996. Riparian exclosures and associated water developments.	
1998	1998 Watershed Restoration Project, implement livestock water developments, implement fish habitat inventories, collect information on fish populations in Shitike Creek.	
9802800	Trout Creek Watershed Improvement Project Multi Year Funding Proposal	Jefferson County Soil & Water Conservation District
1995	Published Assessment of Trout Creek	
1998	Installed two infiltration Galleries to address hindered fish passage	
1999	Funds for two infiltration galleries in lower Trout Creek	
1999	NRCS has declared the watershed a Geographical Priority Area for EQIP funds	
1999	Funds for streambank stabilization	
9900600	Restoration of Riparian Habitat in Bakeoven / Deep Creeks	Wasco County Soil and Water Conservation District
1994	Preliminary watershed project planning	
1996	Watershed Action Plan Developed, Upland treatment began	
1998	Continuing upland treatments	
1999	Riparian Assessment & Detailed Planning	
20113	Securing Wildlife Mitigation Sites - Oregon, South Fork Crooked River	Oregon Department of Fish and Wildlife
1993	Created a list of potential wildlife mitigation projects throughout Oregon	
1997	Compiled more comprehensive prioritized list of mitigation sites; identified South Fork Crooked River area as priority area	
1998	FY99 proposal for $20,000 to ease and enhance 2,000-acre parcel was approved and recommended	
1998	Began landowner negotiations for conservation easement of parcel along the South Fork Crooked River	
1998	Developed partnerships with Confederated Tribes of the Warm Springs Reservation, BLM, and The Nature Conservancy to help facilitate project objectives	

Wildlife

92-84	The Oregon Trust Agreement Planning Project	

1992	Initiated to identify potential mitigation sites through Oregon and to estimate costs for fully mitigation Oregon wildlife losses.
1993	Completed project identified 287 potential wildlife mitigation sites throughout Oregon. Estimated costs for full mitigation averaged $250 million.
95-65	Assessing Oregon Trust Agreement Planning Project Using Gap Analysis: Potential mitigation impacts for the impacts to Oregon wildlife resources associated with relevant mainstem Columbia River and Willamette River hydroelectric projects
1995	Project initiated to re-evaluate and prioritize potential mitigation sites throughout Oregon.
1997	Draft results provided prioritized list of mitigation sites.
9705900	Securing Wildlife Mitigation Sites – Oregon
1998	The Oregon Wildlife Coalition developed and submitted a programmatic project proposal for FY1999 funds. This proposal explained intent for mitigation planning, coordination, and implementation by Oregon wildlife managers within Oregon and identified priority projects for FY1999 with specific budgets to help meet wildlife mitigation objectives.
1998	Project was recommended by the NPPC for $4 million.
1998	Efforts to implement individual mitigation projects occurred.

John Day Subbasin

20035	Water Right Acquisition Program (Multi-Year Fy 2000-2002)	Oregon Water Trust
1994	4 water right acquisitions (statewide); total flow acquired 1.84 cfs; protected 3.8 river miles. [1 acquisition in Project subbasins.]	
1995	10 water right acquisitions (statewide) total flow acquired 8.25-10.81 cfs protected 29.6 river miles. [3 acquisitions in Project subbasins.]	
1996	25 water right acquisitions (statewide); total flow acquired 20.33-22.72 cfs; protected 254 river miles. [12 acquisitions in Project subbasins.]	
1997	27 water right acquisitions (statewide); total flow acquired 19.70-21.30 cfs; protected 271 river miles. [11 acquisitions in Project subbasins.]	
1998	31 water right acquisitions (statewide); total flow acquired 21.42-23.03 cfs; protected 288 river miles. [11 acquisitions in Project subbasins.]	
20514	John Day River Umbrella	Oregon Department of Fish and Wildlife
1985	Completion of John Day River chinook salmon study	
1985	Beginning of John Day River habitat enhancement project	
1998	Beginning of John Day River natural escapement study as part of PATH	
1997	John Day River Fish Screens	
9306600	Oregon Fish Screening Project - Fy'00 Proposal	Oregon Department of Fish and Wildlife
1997	Built 29 new screens	
1998	Built 27 new screens	
1997	Installed fish passage improvement on Upper Trout Creek	
1998	Installed fish passage improvement on Lower Trout Creek	
9801600	Monitor Natural Escapement & Productivity of John Day Basin Spring Chinook	Oregon Department of Fish and Wildlife
1998	Conducted multiple and extensive spawning surveys in John Day subbasin.	
1998	Sampled over 300 carcasses of spawned spring chinook salmon to determine sex and age.	
8402100	Protect and Enhance Anadromous Fish Habitat in the John Day Subbasin	Oregon Department of Fish and Wildlife
1998	Constructed 132 miles of riparian livestock exclosure fencing protecting 72 miles of stream and 1,512 acres of riparian habitat. Planted 7,450 riparian trees or shrubs, and installed 3,040 in-stream structures.	
9303800	North Fork John Day Area Riparian Fencing	U.S. Forest Service, Umatilla National Forest

1995	Protect 60 miles of riparian habitat	
1996	Protect 60 miles of riparian habitat	
1997	Protect 60 miles of riparian habitat	
1998	Protect 60 miles of riparian habitat	
9605300	Upper Clear Creek Dredge Tailings Restoration	U.S. Forest Service, Umatilla National Forest
1993	Pilot Project Completed, ½ mile restored	
1994	Monitoring of Pilot Project	
1995	2 miles of restoration, NFJD River	
1996	3 miles of restoration, NFJD River	
1997	4 miles of restoration, NFJD River	
9703400	Monitor Fine Sediment and Sedimentation in John Day and Grande Ronde Rivers	Columbia River Inter-Tribal Fish Commission
1998	We were notified that submission of an article summarizing results of previous unfunded work similar to the project was accepted for publication in a peer-reviewed proceedings.	
1998	Biological assessment completed and consultation with NMFS concluded with letter concurring that the project was unlikely to adversely affect spring/summer chinook or their habitat.	
1998	Surface fine data collected in four reaches in Grande Ronde and John Day Rivers and containers of cleaned gravels emplaced in streambed excavated to mimic salmon redds, prior to the onset of salmon spawning.	
1998	Mid-winter collection of previously emplaced containers of gravels for particle size analysis and determination of level of mid-winter sedimentation of fine sediments.	
9901000	Mitigate Effects of Runoff & Erosion on Salmonid Habitat in Pine Hollow	Pine Hollow Watershed Council, c/o Sherman Soil and Water Conservation District
1997	Demonstration Phase implementation	
1998	Begin upland practices	
1998	Assess stream condition	
1999	Continue installation of upland practices	
1995	Begin temperature monitoring	
1996	Begin steelhead spawning surveys	
20134	Acquire Oxbow Ranch -- Middle Fork John Day River	Confederated Tribes of the Warm Springs Reservation of Oregon
1993	Created a list of potential wildlife mitigation projects throughout Oregon.	
1997	Compiled a more comprehensive prioritized lists of mitigation sites; identified Middle Fork John Day as a priority area.	
1998	Developed partnership with The Nature Conservancy to facilitate project objectives.	
1998	TNC began landowner negotiations for land acquisitions.	
1998	Title to 1022-acre property secured by TNC.	
20077	Inventory & Assessment of Irrigation Diversion Alternatives to Push-up Dams	U.S. Bureau of Reclamation
1994	Water Conservation Demonstration Projects - John Day River Basin, (Twenty projects divided into four phases under the NPPC's 1994 F&W Plan, Measure 7.8.H)	
9801700	Eliminate Gravel Push-Up Dams on Lower North Fork John Day	North Fork John Day Watershed Council
1998	Installation of River Meadows permanent pumping station.	
1998	Installation of Schultz Ranch permanent pumping station.	
9801800	John Day Watershed Restoration	Confederated Tribes of the Warm Springs Reservation of Oregon
1995	Completion of Phase I implementation activities	
1996	Completion of Phase II implementation activities.	
1997	Completion of Phase III implementation activities.	
1998	Completion of Phase IV implementation activities.	

9802200	Pine Creek Ranch Acquisition	Confederated Tribes of the Warm Springs Reservation of Oregon
1993	Participated in creating a list of potential wildlife mitigation projects throughout Oregon.	
1997	Identified Pine Creek Ranch as a potential mitigation site. Proposal submitted for FY1998 BPA wildlife and watershed funds.	
1998	Began landowner negotiations for acquisition in cooperation with Trust for Public Lands and William Smith Properties. Proposal is recommended for FY1999 BPA wildlife and watershed funds.	
1999	Appraisal completed. Landowner negotiations continue.	
92-84	The Oregon Trust Agreement Planning Project	
1992	Initiated to identify potential mitigation sites through Oregon and to estimate costs for fully mitigation Oregon wildlife losses.	
1993	Completed project identified 287 potential wildlife mitigation sites throughout Oregon. Estimated costs for full mitigation averaged $250 million.	
95-65	Assessing Oregon Trust Agreement Planning Project Using Gap Analysis: Potential mitigation impacts for the impacts to Oregon wildlife resources associated with relevant mainstem Columbia River and Willamette River hydroelectric projects	
1997	Project initiated to re-evaluate and prioritize potential mitigation sites throughout Oregon.	
2001	Draft results provided prioritized list of mitigation sites.	
9705900	Securing Wildlife Mitigation Sites – Oregon	
1998	The Oregon Wildlife Coalition developed and submitted a programmatic project proposal for FY1999 funds. This proposal explained intent for mitigation planning, coordination, and implementation by Oregon wildlife managers within Oregon and identified priority projects for FY1999 with specific budgets to help meet wildlife mitigation objectives.	
1998	Project was recommended by the NPPC for $4 million.	
1998	Efforts to implement individual mitigation projects occurred.	

Umatilla Subbasin

20516	Umatilla Subbasin Umbrella Oregon Department of Fish and Wildlife
1986	Development of A Comprehensive Plan for Rehabilitation of Anadromous Fish Stocks in the Umatilla River Subbasin
1987	Initiation of Habitat Enhancement Projects
1988	Completion of Three Mile Dam ladder and adult trapping facility
1990	Initiation of Umatilla Natural Production M&E
1992	Completion of Umatilla Hatchery - began production of fall and spring chinook and summer steelhead juveniles for release into the Umatilla River
1993	Identified potential wildlife mitigation opportunities by priority (OTAP Project)
1995	Initiation of juvenile salmonid outmigration studies
1997	Created series of databases and GOA layers to assist in the evaluation of potential wildlife mitigation projects (GAP Analysis Project)
1998	Full implementation of Phases 1 and 2 of the Umatilla Basin Water Exchange Project
1998	Construction of new ladders and screens at major irrigation diversions along the Umatilla River occurred throughout the late 1980s and 1990s
1998	Construction of Umatilla Satellite facilities for acclimating juveniles and holding adult broodstock occurred throughout the late 1980s and 1990s

8802200	Umatilla River Fish Passage Operations Confederated Tribes of the Umatilla Indian Reservation
1989	Adult and Juvenile Trapping and Transportation
1991	Operation of Juvenile Bypasses and Adult Ladders
1993	Coordination of Umatilla Basin Project

8902401 Evaluate Juvenile Salmonid Outmigration and Survival in the Lower Umatilla Oregon Department of Fish and Wildlife

1997 Video monitored fish behavior / passage
1997 Evaluated transport of juvenile fish
1997 Completed Final Report for Passage Evaluation Study
1997 Measured velocities at key locations at the fish ladder and canal facility
1997 Determined diel patterns of fish movement
1997 Determined condition of juvenile migrants
1997 Identified fish predators
1998 Evaluated new color marking techniques
1998 Estimated lower river natural production
1998 Estimated survival of hatchery migrants
1998 Determined trap efficiencies
1998 Investigated feasibility of PIT tag use
1998 Determined relationship between flow and fish migration
1998 Determine migration patterns of migrants

900050 Umatilla River Basin Natural Production Monitoring and Evaluation Confederated Tribes of the Umatilla Indian Reservation

1991-1999 Spawning Surveys. Annual spawning surveys (1991-1999) documented the location and timing of spawning for each species and stock (chinook, coho, steelhead and bull trout). Annually, we estimate prespawning mortality, total number of redds, the ratio of redds/adult available to spawn and total egg deposition.

1993-1999 Trapping. We traps in tributaries, the upper mainstem Umatilla and in the mid-mainstem Umatilla River. Trap data has provided considerable age, growth and life history data. Estimating smolt production was confounded by floods, debris and trap damage. Beginning in 1999 we are using PIT tags to estimated timing and survival of down stream migrants.

1993-1999 Salmonid density and abundance estimates. This project examines salmonid populations to determine their natural rearing success and production potential. We have observed natural juvenile salmon and steelhead in quality rearing habitat with densities often ranging from 50 to 200 fish/100 m2 and occasionally as high as 400 fish/100 m2 (Contor et al. 1994, 1995, 1996, 1997 and 1998). By combining salmonid density data with habitat assessment data, we estimate that natural salmonid production could triple with moderate improvements in stream habitat quality (primarily water temperature, sediment and flows). Extensive improvements in stream habitat could yield additional production but would require the removal of passage barriers on some tributaries and extensive habitat improvements in the more degraded stream reaches.

1994-1999 Salmonid index. We established permanent index sites to monitor trends in annual reproductive and rearing success of natural salmonids. Each year we estimate densities of salmon and steelhead at fixed sites throughout the basin. Salmonid abundance and densities have fluctuated with environmental conditions. We found steelhead rearing densities were higher and more stable from year to year than chinook salmon. Chinook salmon abundance has fluctuated significantly and is clearly related to the number of available spawners and the occurrence of high flows that can scour salmon redds.

1993-1999 Harvest monitoring. CTUIR monitors the tribal harvest of summer steelhead and salmon. Tribal fisherman harvested from 25 to 39 steelhead annually. Tribal spring chinook salmon fisheries have occurred during the summers of 1993, 1996 and 1997 with 176, 167 and 183 spring chinook harvested respectively (Contor et al. 1998).

1993-1999 Temperature monitoring. This project monitors water temperatures throughout the Umatilla River Basin in coordination with other CTUIR projects, ODFW, USFS and BOR. Water temperature data has been useful in estimating the suitability of stream reaches for salmonid production and in understanding current

salmonid life histories and the distribution of salmonids in the basin. We provide water temperature data to DEQ and the TMDL program for thermal pollution assessments and water temperature modeling.

1993-1999 Life Histories. We have developed detailed knowledge of juvenile salmonid life histories in the Umatilla Basin by combining data from traps, electrofishing data (all four seasons) and from salmonid age and growth data (CTUIR 1994, Contor et al. 1995, 1996, 1997 and 1998). For each species and each section of the basin we identified the primary risks to successful natural production. Risks include scouring of redds, high summer temperatures and excessive sedimentation.

1992 Genetic monitoring. We collected samples for the genetic studies conducted by Currens and Schreck (1993, 1995). In 1999 we planned to collect additional samples. However, funding has been cut for genetic analysis in FY2000.

1993-1998 Habitat surveys. Habitat surveys were coordinated and conducted by CTUIR, USFS and ODFW. CTUIR completed intensive habitat assessments on 138.5 miles of stream in the basin. This data provided the basis for estimating basin-wide salmonid abundance and production potential estimates. In addition, the Total Maximum Daily Load program and temperature modelers have been using this habitat data to examine pollution abatement options in the basin.

1994-1996 Radio telemetry. This project completed a three-year evaluation of the adult passage facilities using radio telemetry techniques. We documented the successful passage of salmon and steelhead over all irrigation diversions in the Umatilla River. We observed adult passage problems at Feed Canal Dam each year.

1993-1999 Residualization. We have observed few residual hatchery reared Umatilla steelhead during extensive sampling.

1993-1999 Natural salmonid production estimates. Estimate the natural production of salmonids in the Umatilla Basin under fluctuating conditions of flood and drought. Estimates are based on habitat surveys, electrofishing efforts, spawning ground surveys, and water temperature data.

1993-1999 Bull trout Investigations. Workers record all pertinent data from any bull trout observed or collected during field activities (surveys, electrofishing, trapping, etc.). We report all bull trout data to ODFW and other interested groups.

8343600 Umatilla Passage Facilities O&M Westland Irrigation District 1998 Maintenance of trapping facilities

1998 Maintenance of spawning facilities
1998 Operation and Maintenance of Juvenile bypasses and Adult Ladders
1998 Maintenance of Acclimation Sites

8710001 Enhance Umatilla River Basin Anadromous Fish Habitat Confederated Tribes of the Umatilla Indian Reservation

1998 Have secured 35 riparian easements on private properties since 1988.
1998 Have enhanced 13.8 stream miles of habitat on private properties since 1988.
1998 Have constructed approximately 20 miles of riparian corridor fencing, seeded 5,600 lbs. of native grasses, planted 40,250 native trees, placed 348 pieces of large woody debris, and constructed 59 tree bank revetments, 95 sediment retention structures, 11 weirs and 39 wing deflectors since 1988.
1998 Have provided numerous oral presentations, tours, workshops, educational opportunities, etc. to promote habitat restoration and watershed management since 1988.

8710002 Protect and Enhance Anadromous Fish Habitat in the Umatilla River Subbasin Oregon Department of Fish and Wildlife

1998 Protected 11 miles of stream by installing 16 miles of fence and retrofitting existing projects with bioengineering treatments.

8902700	Power Repay Umatilla Basin Project Bonneville Power Administration
1995	Provide power cost reimbursement for Umatilla Basin Project

8903500	Umatilla Hatchery Operation and Maintenance Oregon Department of Fish and Wildlife1991 First year of operation
1992	Released 2.68M subyearling fall Chinook, 267k fry and 1.06 subyearling spring Chinook, and 204k smolt summer steelhead
1993	Released 2.66M subyearling fall Chinook, 1.13 subyearling and 208k smolt spring Chinook, and 159k smolt summer steelhead
1994	Released 2.85M subyearling fall Chinook, 840k subyearling and 594k smolt spring Chinook, and 156k smolt summer steelhead
1995	Released 2.47M subyearling fall Chinook, 277k smolt spring Chinook, and 148k smolt summer steelhead
1996	Released 2.97M subyearling and 144k smolt fall Chinook, 381k smolt spring Chinook, and 149k smolt summer steelhead
1997	Released 2.83M subyearling and 260k smolt fall Chinook, 227k smolt spring Chinook, and 140k summer steelhead
1998	Released 2.78 subyearling fall Chinook, 383 smolt spring Chinook, and 138k smolt summer steelhead

9000500	Umatilla Hatchery Monitoring and Evaluation Oregon Department of Fish and Wildlife
1996	Completed tagging, growth, and juvenile migration monitoring for five broods of subyearling fall chinook salmon (CHF0) reared in Michigan (MI) and Oregon (OR) raceways; coded-wire-tag (CWT) recovery from adults has been completed for two broods.
1998	Completed tagging, growth, and juvenile migration monitoring for two broods of CHF0 reared at three different densities; CWT recovery is incomplete for all broods.
1998	Completed tagging and juvenile migration monitoring for two broods of yearling fall chinook salmon (CHF1) reared in MI and OR raceways at Umatilla Hatchery and seven broods reared at other hatcheries; CWT recovery is incomplete for all broods.
1998	Completed seven years of marking and wire-tagging fall chinook salmon (all rearing strategies) to monitor straying rates into Snake River.
1998	Completed marking and wire-tagging of three broods of CHF0 to determine effects of mark and tag on smolt-to-adult survival; CWT recovery was completed in 1998.
1998	Completed tagging, growth, and juvenile migration monitoring for three broods of subyearling spring salmon (CHS0) reared in MI and/or OR raceways and released in the spring; CWT recovery for two broods was completed in 1998.
1998	Completed tagging and juvenile migration monitoring for three broods of fall-released (CHS0) reared at Umatilla and Bonneville hatcheries; CWT recovery for the first brood was completed in 1998.
1998	Completed tagging and juvenile migration monitoring for three broods of yearling spring chinook salmon (CHS1) reared in MI and OR raceways and released in the spring; CWT recovery for the first brood was completed in 1998.
1998	Completed tagging and juvenile migration monitoring for five broods of spring-released CHS1 reared concurrently at Umatilla Hatchery and Bonneville or Carson or Little White Salmon hatcheries; CWT recovery for one brood was completed in 1998.
1998	Completed tagging, growth, and juvenile migration monitoring for seven broods of steelhead (STS) reared in MI raceways; CWT recovery for three broods was completed in 1998.
1998	Completed seven years of weekly water quality monitoring in MI and OR raceways associated with varying fish production strategies. Completed six years of salmon and steelhead creel surveys and harvest estimates for Umatilla River sport fishery.
1998	Completed six years of Hatchery Fish Production planning and coordination activities for Umatilla Basin.
1998	Completed six years of fish health and disease monitoring for fish released in the Umatilla River. 8343500. Operate and Maintain Umatilla Hatchery Satellite Facilities Confederated Tribes of the Umatilla Indian Reservation.
1998	Acclimated and released 20.0 million summer steelhead, coho, and fall and spring chinook from project facilities from 1983 to 1998.
1998	Held and spawned approximately 6,300 broodstock in project facilities from 1983 to 1998.

1998	Collected approximately 9.4 million summer steelhead, coho and fall and spring chinook eggs from project facilities from 1983 to 1998. Eggs were provided to Umatilla and other hatcheries for incubation, rearing and release in the Umatilla Basin.

9506001	Protect & Enhance Wildlife Habitats in the Squaw Creek Watershed Confederated Tribes of the Umatilla Indian Reservation
1988	The Umatilla Drainage Fish Habitat Improvement Plan identified and prioritized 7 miles of riparian/stream habitat in Squaw Creek for improvement.
1994	Ten miles of fish habitat in Squaw Creek were surveyed. Fish surveys and population estimates were also completed.
1995	The Squaw Creek Watershed Project was identified and prioritized in both the anadromous and wildlife caucuses for joint funding.
1997	Approximately 5,536 acres of land were purchased to form the nucleus of the Squaw Creek Watershed Project. Additionally, 1005 acres of BIA administered trust lands were incorporated into for mitigation purposes.
1998	An additional 320 acres of fee lands, consisting primarily of coniferous forest and grassland cover types was purchased.
1998	Two BIA-administered grazing allotments, totaling approximately 20,000 acres and 1,056 AUM's were leased.
1998	HEP analysis initiated, field surveys completed for riparian and grassland cover types.
1998	Management planning process initiated. Scoping notices provided in local media, inter-agency HEP team.
1999	Field surveys for timber cover types completed. HEP analysis for all cover types and target species completed.
1999	Completed comprehensive management plan, including HEP.
2000	Implementation of management plan, including protection, enhancements/restoration, and operations/maintenance.

92-84	The Oregon Trust Agreement Planning Project
1992	Initiated to identify potential mitigation sites through Oregon and to estimate costs for fully mitigation Oregon wildlife losses.
1997	Completed project identified 287 potential wildlife mitigation sites throughout Oregon. Estimated costs for full mitigation averaged $250 million.

95-65	Assessing Oregon Trust Agreement Planning Project Using Gap Analysis: Potential mitigation impacts for the impacts to Oregon wildlife resources associated with relevant mainstem Columbia River and Willamette River hydroelectric projects
1997	Project initiated to re-evaluate and prioritize potential mitigation sites throughout Oregon.
2001	Draft results provided prioritized list of mitigation sites.

9705900	Securing Wildlife Mitigation Sites – Oregon
1998	The Oregon Wildlife Coalition developed and submitted a programmatic project proposal for FY1999 funds . This proposal explained intent for mitigation planning, coordination, and implementation by Oregon wildlife managers within Oregon and identified priority projects for FY1999 with specific budgets to help meet wildlife mitigation objectives.
1998	Project was recommended by the NPPC for $4 million.
1998	Efforts to implement individual mitigation projects occurred.

Walla Walla Subbasin

20138	Design and Construct Neoh Walla Walla Hatchery	Confederated Tribes of the Umatilla Indian Reservation
1995	Conceptual Walla Walla Hatchery designs completed as part of designs for existing spring chinook adult holding/spawning facility	
1998	Draft NEOH - Walla Walla Hatchery Master Plan	
9601100	Walla Walla River Juvenile and Adult Passage Improvements	Confederated Tribes of the Umatilla Indian Reservation

1997	Removed Marie Dorian Dam on Walla Walla River	
1998	Removed Maiden Dam-Touchet River	
1998	Designed and constructed Burlingame fish ladder and adult trap-Walla Walla River	
1999	Constructed Nursery Bridge Dam fish ladder and adult trap-Walla Walla River	
1999	Constructed juvenile screens, juvenile bypass and trap at Little Walla Walla Diversion-Walla Walla River	
1999	Constructed/renovated juvenile screens at Burlingame Dam-Walla Walla River	
1999	Designed Garden City/Lowden II consolidation-Walla Walla River	
1999	Designed Hofer's Dam fish ladder-Touchet River	
9604601	Walla Walla Basin Fish Habitat Enhancement	Confederated Tribes of the Umatilla Indian Reservation
1997	Developed long-term leases with landowners on Blue Creek and Couse Creek	
1997	Obtained archeological clearances, obtained instream work permits	
1997	Developed project design	
1997	Develop subcontracts for weed control, planting, heavy equipment rental, fencing, rock and tree supply	
1997	Implemented two adjacent projects on Blue Creek	
1997	Implemented project on Couse Creek	
1997	Collected pre and post project monitoring data: photo points, transects, water temperatures, population densities	
1997	Identified habitat limited sites within basin, prioritized sites, selected projects for potential restoration in 1998.	
1998	Secured cost-share funding for WSU watershed assessment for Walla Walla Basin	
1998	Developed long-term leases with landowners on Couse Creek and mainstem Walla Walla River	
1998	Obtained archeological clearances, obtained instream work permits	
1998	Developed project design	
1998	Develop subcontracts for weed control, planting, heavy equipment rental, fencing, rock and tree supply	
1998	Implemented projects on Couse Creek, and mainstem Walla Walla River	
1998	Continued operation and maintenance on project sites on Couse Creek and Blue Creek	
1998	Collected pre and post project monitoring data: photo points, transects, water temperatures, population densities	
1998	Identified habitat limited sites within basin, prioritized sites, selected projects for potential restoration in 1999	
1998	Rainwater Wildlife Mitigation Project purchased	Confederated Tribes of the Umatilla Indian Reservation
20127	Walla Walla River Basin Monitoring and Evaluation Project	Confederated Tribes of the Umatilla Indian Reservation
1998	M & E Plan - Through coordination with ODFW & WDFW, developed an M&E plan to address the urgent information needs first and move into secondary information needs in following years. Additional M&E objs to be added following spring chinook reintroduction e	
1998	Temperature monitoring - Monitor water temperatures throughout the Walla Walla River Basin in coordination with other CTUIR, WDFW, ODFW and USFS projects. Water temperature data has been useful in estimating the suitability of stream reaches for salmonid	
20139	Walla Walla River Fish Passage Operations	Confederated Tribes of the Umatilla Indian Reservation
1998	Provide Technical Input on Passage and Trapping Facility Designs	
9901100	Assess Fish Habitat & Salmonids in the Walla Walla Watershed in Washington	Washington Department of Fish and Wildlife
1998	collected and summarized data to quantify summer temperatures and flows in the mainstem Walla Walla and Touchet rivers	
1998	obtained data regarding salmonid distribution and densities in the Touchet and Walla Walla river mainstems	
1998	collected genetic samples from steelhead and bull trout in Mill Creek and the Walla Walla River in Oregon	

Yakima Subbasin

Passage

One of the first Yakima River enhancement projects in the post-Power Act era addressed serious adult and juvenile passage problems associated with irrigation diversions, large and small. By 1989, new, angled rotary drum screens were

installed at canal headworks, and adult passage facilities were improved or wholly rebuilt at the following major diversion dams: Easton, Roza, Wapato, Sunnyside, Prosser and Horn Rapids. This work represents a major improvement in habitat quality in the basin. It did not, however, completely solve all passage problems associated with irrigation diversions. In particular, a large number of moderately sized or small diversions within current production areas still suffered from antiquated, deteriorating screens and bypass systems. Upgrading these smaller, "phase 2" diversions then became the major focus of passage enhancement efforts funded under the Fish and Wildlife Program. By the end of 1998, most Phase-2 diversions had been retrofitted and evaluated, and provisions made for regular O&M. The table below summarizes all of the passage-related projects active during the last several years and their accomplishments.

8506200	Passage Improvement Evaluation	Pacific Northwest National Laboratory
1998	Completed on-site evaluations of Phase II screens in the Yakima Basin (report in progress)	
1997	Completed on-site evaluations of Phase II screens in the Yakima Basin (Blanton, Neitzel, and Abernethy, in press).	
1997	Completed laboratory studies testing salmonid response to infrasound (Mueller RP, DA Neitzel, WV Mavros and TJ Carlson. 1998. Evaluation of low and high frequency sound for enhancing fish screening facilities to protect outmigrating salmonids.	

9105700	Yakima Phase 2 [Fish] Screen Fabrication	Washington Department of Fish and Wildlife
1998	Screen fabrication/installation completed for: Old Union Canal and Younger Ditch irrigation diversions; shop fabrication of Johncox, Fogarty screens for 1999 install	
1997	Screen facilities fabricated/installed: Bull, Ellensburg Mill, Clark, Lindsey, Union Gap, Upper WIP (install)	
1996	Facilities fabricated/installed: Fruitvale, Naches-Selah, Emerick, Stevens, Anderson, Tennant, Sinclair-Cobb, Gnavaugh, Peterson	
1995	Facilities fabricated/installed: Toppenish Pump, Upper WIP fabrication	
1994	Facilities fabricated/installed: Bachelor-Hatton, Congdon, Kelly-Lowry	
1993	Facilities fabricated/installed: Gleed, Holmes, Lower WIP, New Cascade, Snipes-Allen, Taylor,	
1992	Facilities fabricated/installed: Naches-Cowiche, Kiona.	

9107500	Yakima Phase II Screens – Construction	U.S. Bureau of Reclamation
1990	Planning Report completed	
1992	First construction contracts awarded	
1995	14 screen sites completed (1992-1995)	
1998	11 screen sites completed (1996-1998)	

9200900	Yakima [Fish] Screens - Phase 2 - O&M	Washington Department of Fish and Wildlife
1998	new O&M sites: Younger, Old Union	
1997	new O&M sites: Bull, Ellensburg Mill, Clark, Lindsey, Union Gap	
1996	new O&M sites: Fruitvale, Naches-Selah, Emerick, Stevens, Anderson	
1994	new O&M sites: Congdon, Kelly-Lowry	
1993	new O&M sites: Gleed, New Cascade, Holmes, Snipes-Allen, Taylor	
1992	new O&M sites: Naches-Cowiche, Kiona (now abandoned)	

9503300	O&M of Yakima Phase II Fish Facilities	U.S. Bureau of Reclamation

YKFP Related Projects

A major proportion of enhancement funds are directed to the YKFP. Below are summarized all of the recent Fish and Wildlife Program projects applicable to various aspects of the YKFP.

YKFP Management & Policy

As in all large projects, a significant amount of the budget must be allocated to management and, especially in the case of the YKFP, to resolving Policy issues. Major recent accomplishments include transfer of all management responsibility for the YKFP from BPA to the YIN in 1997, and the adoption of a refined project management structure in 1998.

20510	Yakima/Klickitat Fisheries Project – Umbrella	Yakama Indian Nation

8812025	YKFP Management, Data and Habitat	Yakama Indian Nation

1997 Acting as Lead Agency, YIN implemented YKFP operations; managed and directed all YIN management, administrative, science and technical personnel; participated in all activities affecting Project management and administration.
1997 As co-managers, the YIN and WDFW developed project policy and implemented planning functions
1997 YIN and WDFW -- organized and ensured successful completion of Project Annual Review
1997 YIN and WDFW -- coordinated all environmental compliance activities with BPA
1997 YIN and WDFW -- managed and directed all sub-contractors providing services to the Project
1998 YIN and WDFW performed all management activities listed above

9506425	YKFP – WDFW Policy and Technical Involvement in the YKFP	Washington Department of Fish and Wildlife

1987 Draft Master Plan for YKFP
1987 PPC approves master plan
1990 Preliminary Design Report to PPC
1990 PPC approval to proceed to final design
1992 Draft EIS issued with 7-stock project
1992 Conducted first Project Annual Review and repeated annually thereafter
1993 Completion of first Project Status Report and amended annually thereafter
1993 Completion of first Uncertainty Resolution Plan
1995 Revised draft EIS with 3-stock project
1995 Experimental treatment definitions and biological specifications completed for use in design of Cle Elum Hatchery
1995 Procedures Manual for operations at Cle Elum Hatchery
1996 Final EIS issued
1996 Construction contract for Cle Elum Hatchery
1997 First spring chinook broodstock delivered to Cle Elum Hatchery
1997 Monitoring Implementation Planning Team completed the Yakima Fisheries Project Spring Chinook Supplementation Monitoring Plan under the guidance of the YIN and WDFW Policy Group and the Scientific and Technical Advisory Committee
1998 YKFP Policy Group adopted a refined project management structure

Hatchery Supplementation

8811525	Yakima/Klickitat Fisheries Project Design and Construction	Yakama Indian Nation

1997 Final design and construction of Cle Elum Supplementation and Research Facility (CESRF).
1998 Scheduled final design and construction of CESRF acclimation sites at Easton, Clark Flats, and Jack Creek.
1997 Final design and construction of Prosser Fish Facility's used for coho and fall chinook spawning, incubation, and rearing.
1994 Final design and construction of Roza Adult Fish Monitoring and Broodstock Collection Facility.
1987 Final design, construction and modification of the Chandler Juvenile Fish Monitoring Facility.
1987 Final design, and construction of the adult video monitoring facilities at Prosser and Roza dams (1987-1992).

9701325	Yakima/Klickitat Fisheries Project Operations and Maintenance	Yakama Indian Nation

1998 Collected and 408 spring chinook adults at the Roza adult facility and successfully spawned the fish at the Cle Elum Central Rearing Facility (CECRF).
1997 Collected 261 spring chinook broodstock at the Roza adult collection facility

1997 Broodstock held at CECRF.
1997 239 broodstock spawned in Sept/Oct
1997 Eggs incubated and hatched
1998 Juveniles ponded and OCT/SNT experimental treatments applied.
1998 Collected 408 spring chinook broodstock at the Roza adult collection facility.
1998 Broodstock held at CESRF.
1998 350 broodstock spawned in Sept/Oct
1998 Eggs incubated.
1994-1998 Acclimated 1.7 million Up-River Brights (URB) at PFF.
1996-1998 Initiated fall chinook broodstock capture feasibility .
1996-present Spawned, incubated and hatched fall chinook at PFF and MDFF.
1994-1998 Acclimated from 700,000 (1994-1996) to 1.4 million coho smolts from lower Columbia River hatcheries.
1997-1998 Initiated coho broodstock collection feasibilitly work.
1997-1998 Spawned, incubated and hatched coho at PFF. Successful O&M of facilities from 1992 through present.

Monitoring and Evaluation

9506325	Yakima/Klickitat Fisheries Project Monitoring and Evaluation	Yakama Indian Nation

1998 Monitoring prescriptions for 16 non-target taxa of concern have been developed and are being implemented to meet conservation objectives
1998 A practical approach for assessing ecological risks associated with stocking anadromous salmonids was developed to facilitate decision making and direct monitoring efforts.
1999 Preliminary results of indirect predation experiments suggest that hatchery fish may decrease survival of commingled smolts during certain portions of the spring and increase survival at other times.
1998 Completed laboratory studies testing salmonid response to infrasound and strobe lights (report in progress). This study was an attempt to determinewhether an array of strobe lights or infra-sound emitters would be capable of diverting a high proportion of migrant smolts into a trap built into the Roza Dam bypass, so that wild and hatchery fish in adeauate numbers could be captured, PIT-tagged and released. The object of these releases is to estimate relative hatchery/wild smolt survival to Prosser Dam on the lower Yakima.
1998 Fish predation indices were developed for smallmouth bass and northern pikeminnow; a channel catfish index is under development. Preliminary estimates indicate that smallmouth bass consumed 524,000 chinook salmon juveniles in the spring of 1998.
1998 Produced manuscript titled "A Production Function Based Model of Supplementation Dynamics" submitted to Trans. Am. Fish Soc.
1998 Produced multi-year power analysis of OCT/SNT survival comparison
1998 Modelled genetic effects of broodstock collection and usage rules
1998 Recorded detailed behavioral observations on wild spawning spring chinook (first ethological description of these behaviors on Columbia River spring chinook)
1998 Characterised detailed reproductive traits of Yakima wild spring chinook
1998 Developed DNA microsatellite profiles of Yakima spring chinook populations
1998 Developed 4 supplementation dynamics computer models
1997 Produced Yakima Fisheries Project Spring Chinook Supplementation Monitoring Plan (DOE/BP-64878-1)
1996 Developed "Pedigree" computer model for investigation of monitoring power using DNA markers.
1994 Produced report "Experimental designs for testing differences in survival among salmonid populations" (DOE/BP-00029-3)
1998 Refined species-specific outmigration estimators for Chandler smolt trap.
1997 Began broodstock collection of upper Yakima spring chinook at Roza Dam in 1997 and continued in 1998 using outlined genetic selection guidelines (Busack et al. 1997).
1998 The adult broodstock collection and monitoring facility at Roza Dam was shown to have no adverse effects on passage timing or spawning distribution of wild Yakima spring chinook.
1998 Strobe lights and infrasound were shown to be ineffective fish guidance methods at the juvenile trap at Roza Dam.
1997 Studies indicated that smolts marked with VI-jet tags were not reliably identifiable as adults; therefore, CWTs implanted at multiple body locations were used in 1998 to mark YKFP hatchery spring chinook parr for smolt-to-adult monitoring.

1997 A preliminary ecosystem diagnosis and treatment modeling analysis of Yakima fall chinook indicated that the major factor limiting natural production was a combination of excessive temperature in the lower river and late emergence timing.
1997 Began development of locally-adapted coho and fall chinook broodstocks by collecting returning adults in the Yakima subbasin.
1998 Preliminary results indicate low competitive impacts of outplanted hatchery coho parr on trout.
1997 Survival studies showed benefits from the following rearing treatments: raceway color pattern, overhead cover and mid-water structure. 1997 SNT treatment includes these elements plus mid-water feed delivery.
1998 Plans were developed to retrofit Lyle Falls fishway in the Klickitat subbasin to function as an effective broodstock collection and adult monitoring facility.
1998 Refined and augmented in-basin Yakima harvest monitoring methods.

Habitat Restoration

9901200	Coordinate/Facilitate Watershed Project Planning/Implementation	Kittitas-Yakima Resource Conservation and Development District

1996 Creation of the Yakima River Watershed Interagency Council (YRWIC) by the former watershed planning unit of the Yakima Basin, the Yakima River Watershed Council (YRWC). Integration of YRWIC as technical advisory group to the YRWC established.
1997 YRWIC develops initial list of habitat and salmon recovery related projects taking place in the Watershed, prioritizes resource needs of four subarea basins, identifies gaps where projects are needed.
1998 YRWIC meets monthly despite closure of YRWC. Broadens relationships with state salmon recovery efforts, a new local watershed planning unit, and the Watershed Information Center. Establishment of criteria for ranking watershed projects underway.
1999 Futher develop project ranking and habitat restoration/enhancement implementation processes (under proposal FY 99-01200)

9603501	Satus Watershed Restoration	Yakama Indian Nation

1997 Dike removal
1998 Road obliteration
1997 Boulder placement
1996 Grazing (rest/management)
1996 Fire rehabilitation
1996 Revegetation
1996 Meadow restoration
1997 Large woody debris placement
1997 Aspen regeneration

9705100	Yakima Basin Side Channels	Yakama Indian Nation

1998 Secured landowner signature of MOU, conducted appraisals, hazardous and cultural assessments and property boundary surveys for a 60 acre parcel with intent to purchase
1998 Restored habitat function and passage in degraded alcove.
1998 Conducted coarse-screen inventory of available parcels in key reaches of the basin.
1998 Developed and forwarded MOU to owner of 192-acre parcel with intent to purchase
1998 Secured permits for removal of passage barrier in ground-water fed alcove, to restore migratory access to two miles of off-channel habitat.

9705000	Little Naches River Riparian & In-channel Enhancement Project	Yakama Indian Nation

1998 Review of existing information and watershed analyses completed in the Little Naches
Planning of restoration work in the Little Naches
Monitoring and evaluation of habitat conditions in the lower three miles of the Little Naches including measurements of pool area, large woody debris frequency, canopy cover, channel width and depth.
Riparian vegetation work on open or unstable banks and channels (installation of ~3000 deciduous cuttings and 600 coniferous seedlings)

Completed design plans for installation of boulders and trees into the channel to improve rearing conditions and submitted environmental permitting (work to be completed summer of 1999).

9705300	Toppenish-Simcoe Instream Flow Restoration and Assessment	Yakama Indian Nation
1998	Characterized magnitude, timing and extent of project watercourse (streams and man-made structures) discharge before, during and after one complete irrigation season. Discharge measurement data continue to be collected.	
1998	Completed first year of comprehensive steelhead spawner surveys in project area streams	
1998	Identified extent of habitat utilization by steelehead parr and juveniles in project watercourses, both natural and man-made.	
1999	Rescued and relocated approximately 1,000 juvenile steelhead from stream reaches weeks from total desiccation to perennial reaches above diversion points.	

9803400	Reestablish Safe Access Into Tributaries of the Yakima Subbasin.	Yakama Indian Nation
2000	Gained additional cost-share funding for fishway construction.	

9206200	Yakama Nation - Riparian/Wetlands Restoration	Yakama Indian Nation
1991	Completed initial project plan including Habitat Evaluation Procedures (HEP) estimates for the project area.	
1992	Obtained predesign funding for implementation plan.	
1993	Developed implementation plan and identified 15 priority areas for inclusion into the project (total of 27,000 acres).	
1993	Project progrommatic NEPA work completed, FONSI signed.	
1994	Obj. 1: Secured Priority Area 1 (430 ac).	
1994	Objs. 3 and 4 are ongoing each year and are completed as each property is secured and restored.	
1995	Obj. 1: Secured Priority Area 2 (3,800 ac).	
1995	Obj. 2: Restored wetlands on Priority Area 1.	
1995	Objs. 3 and 4 are ongoing each year and are completed as each property is secured and restored.	
1996	Obj. 1: Secured Priority Area 3 (660 ac).	
1996	Obj. 2: Began restoration activities on Areas 2 and 3, began native grass restoration on Area 1.	
1996	Objs. 3 and 4 are ongoing each year and are completed as each property is secured and restored.	
1997	Obj. 1: Began land securing process for all or portions of Priority Areas 4, 5, 10, 11, 12 and 15.	
1997	Obj.2: Finished restoration of Priority Areas 1 and 3, continued restoration of Priority Area 2.	
1997	Objs. 3 and 4 are ongoing each year and are completed as each property is secured and restored.	
1998	Obj. 1: Secured portions of Priority Areas 5, 10, 11, 12 and 15 (total of 3,415 acres).	
1998	Obj. 2: Completed wetlands restoration on Priority Area 2.	
1998	Objs. 3 and 4 are ongoing each year and are completed as each property is secured and restored.	
1999	Obj. 1: Will complete land securing procedures on Priority Area 4 (~2,500 acres).	
1999	Obj. 2: Restoration will begin on Priority Areas 5, 10, 11, 12 and 15.	
2001	Objs. 3 and 4 are ongoing each year and are completed as each property is secured and restored.	

20003	Enhance Fish Habitat by Improving Water Quality	South Yakima Conservation District
1992	Granger Drain Monitoring Project Dairy Waste Cost-Share Program	
1998	Gray's Landing Poplar Project	
1995	Sulphur Creek Characterization Project	

20010	Improve Fish Habitat by Reducing Farm Sediment Runoff	Benton Conservation District
1997	Cost-share with several growers for on-farm implementation of new irrigation systems.	
1998	Establish on-farm irrigation management training and scientific irrigation scheduling.	

20072	Restoring Perennial Instream Flows At Ahtanum Creek	Dames and Moore
1993	Completed Comprehensive Water Conservation Plan	
1999	Complete Constructibility and Feasibility Review	

Crab Subbasin

91-061	Swanson Lakes Wildlife Area
1990	BPA approval of the Swanson Lakes mitigation project
1992	BPA prepares NEPA with a Finding of No Significant Impact
1993	Acquisition of 10,399 Roloff property
1995	Acquisition of 5,060 acre Welch Property
1995-96	240 acres planted to small grains, 520 acres planted in native grass/forbs and 18,400 shrubs and trees planted
1997	15 acres permanently planted to small grains, 70 acres planted in native grass/forbs and 65,100 shrubs and trees planted
1998	17,100 shrubs and trees planted, established permanent monitoring and evaluation transects
1996	25 miles of new fence was constructed and major repair was completed on 15 miles of fence
1998	Cultural resource survey completed and fire protection contracts obtained

9502800	Restore Moses Lake Recreational Fishery

Wenatchee Subbasin

9604000	Evaluate the Feasibility and Risks of Coho Reintroduction in Mid-Columbia	Yakama Indian Nation
1992	Yakima Basin - Evaluation of coho predation on fall chinook.	
1997	Yakima Basin - Evaluation of coho predation on fall chinook.	
1997	Yakima Basin - Evaluation of coho predation on fall chinook (CONTINUED).	
1998	Yakima Basin - Evaluation of coho predation on fall chinook.	
1998	Yakima Basin - Evaluation of coho predation on spring chinook.	
1998	Yakima Basin - Evaluation of coho competition with rainbow/steelhead and cutthroat trout in Little Naches River and tributaries.	
1998	Yakima Basin - Determination of Little Naches River mainstem coho distribution.	
1996	Methow Basin - Evaluation of vulnerability associated with hatchery coho smolts upon emergent summer chinook fry.	
1997	Methow Basin - Define the “window”of summer chinook fry vulnerability.	
1997	Methow Basin - Observe the macrohabitat utilization between hatchery coho smolts and other juvenile salmonids (primarily summer chinook fry).	
1997	Methow Basin - Macrohabitat habitat utilization (CONTINUED).	
1998	Methow Basin - Monitor hatchery coho residualism.	
1998	Methow Basin - Monitor hatchery coho residualism (CONTINUED).	
1998	Methow Basin - Evaluation of spring chinook fry presence/absence.	
1998	Methow Basin - Evaluation of spring chinook fry presence/absence (CONTINUED).	

Okanogan Subbasin

9604200	Restore and Enhance Anadromous Fish Populations & Habitat in Salmon Creek	Colville Confederated Tribes
1997	Initiated the coordination of a watershed planning project to assist with the restoration and enhancement of the basin's anadromous fish resources through a locally-developed and integrated planning process	
1998	Negotiated a crucial partnership agreement with a primary stakeholder group (the Okanogan Irrigation District) from 1997-1998	

1998	Initiated a joint study with the Okanogan Irrigation District to assess the feasibility of providing instream flows in Salmon Creek below the district's diversion dam while maintaining the irrigation district's water rights: Study--Phase I
1998	Developed a scope of work & recruited engineers/scientists to: study conserva-tion options for the irrig. district, quantify the instream flows requirements for all life stages of anadro. fish in Salmon Creek, develop alternatives to meet these goals
1999	Environmental/Engineer. consultants conducted a study, prepared a report identifying water conservation options, quantifying instream flow requirements, protecting irrigators' water rights, identified alternatives to meet these goals
1999	The Tribes partnered with the NRCS to conduct a riparian corridor assessment: made recommendations for improving bank stability, fish habitat, water quality
1999	Developed a partnership with the U.S. Fish and Wildlife Service and the NRCS to undertake demonstration projects by identifying willing private landowners who could contribute to habitat restoration by restoring the riparian zone on private lands
1999	Initiated partnerships with the Bur. of Rec., the BLM, the WDF&W to perman-ently protect sensitive riparian lands through land exchanges, conservation easements or fee simple acquisitions.

Scotch Creek Wildlife Area	
1997	Mitigation Management Plan approved by BPA
1997-98	Cultural resource survey completed
1997	12 miles of fence repaired to prevent trespass cattle grazing
1997	Habitat Evaluation Procedure completed
1998	Rangeland weed control on 400 acres, 17,000 shrubs planted, shrub pruning and fertilization completed for deer winter range enhancement, prepared fields for grass/forbs seeding and conducted sharp-tailed grouse surveys.

Upper Columbia Mainstem

9800300	O&M Funding Of Wildlife Habitat On Stoi Reservation For Grand Coulee Dam	Spokane Tribe of Indians
1996	Secured Acquisition Funds for Land Purchases	
1997	Lands Acquired for wildlife habitat and enhancements towards BPA accreditation.	
1998	Acquired 1387.5 acres of Mitigation Lands, and proposing to purchase another 439.98 acres to total 1827.5 acres and close out acquisition funds.	
1999	Working on HEP Report and Management Plan for BPA Accreditation.	
20081	STOI Wildlife Land Acquisition and Enhancements.	Spokane Tribe of Indians
1996	Secured Funding for Partial Mitigation of losses due to inundation caused by Grand Coulee Dam.	
1997	Began purchasing lands for mitigation	
1998	Secured 1827.5 acres of land for protection, finishing HEP Report to BPA and Management plans, HEP's completed on 1393.5 acres.	
1999	Completed final land purchase under the Washington Coalition Agreement. Including Tribal contributions, the wildlife program has a total 1863.6 acres to manage for wildlife habitat. Completed purchase of the 439.98 acres with BPA tribal funding for the purchase. The Spokane Tribe is contributing an additional 36 acres in the Blue Cr. Winter Range Area for wildlife habitat.	
20097	Phalon Lake Wild Rainbow Trap Improvements and O&M	Washington Department of Fish and Wildlife
1996	Produced 26,000 redband fingerlings for Kettle River Project.	
1997	Produced 26,000 redband fingerlings for Kettle River Project.	
1998	Produced 26,000 redband fingerlings for Kettle River Project.	
9001800	Evaluate Rainbow Trout/Habitat Improvements of Tribs. to Lake Roosevelt	Colville Confederated Tribes
1990	Fish habitat assessment on 13 streams.	
1990	Fish population census on above streams (13 streams).	

1991	Fish habitat assessment on 14 streams.
1991	Fish population census on above streams (14 streams).
1992	Analyzed barriers to fish migration on 5 project streams (Blue, N. Nanamkin, S. Nanamkin, Iron and Louie).
1992	Designed meander structures for North and South Nanamkin Creeks.
1993	Culvert/passage barrier on North Nanamkin repaired (culvert replaced).
1994	Culvert/passage barrier on Louie Creek repaired (1 culvert replaced).
1994	Culvert/passage barrier on Iron Creek repaired (3 culverts replaced).
1994	6000+ shrubs planted on project streams.
1994	Approximately 4.5 miles of fence installed around sections of North and South Nanamkin Creeks for riparian protection.
1994	1993 through 1995 installed approximately 125 instream structures.
1994	Approximately 150 meters of channel meanders/bank stabilization structures installed (North and South Nanamkin).
1995	Culvert/passage barrier on South Nanamkin repaired (culvert replaced with arch).
1995	Approximately 350 meters of channel meanders/bank stabilization structures installed (North and South Nanamkin).
1995	Constructed/repaired irrigation diversion structures and stream banks on South Nanamkin.
1996	Horizontal stream surveys on the 5 project streams.
1996	Population estimates of juvenile adfluvial rainbow trout.
1996	Adult spawning escapement and juvenile outmigration surveys (trapping).
1997	Horizontal stream surveys on the 5 project streams.
1997	Population estimates of juvenile adfluvial rainbow trout.
1997	Adult spawning escapement and juvenile outmigration surveys (trapping).
1998	Horizontal stream surveys on the 5 project streams.
1998	Population estimates of juvenile adfluvial rainbow trout.
1998	Adult spawning escapement and juvenile outmigration surveys (trapping).
1999	Horizontal stream surveys on the 5 project streams.
1999	Population estimates of juvenile adfluvial rainbow trout.
2000	Adult spawning escapement and juvenile outmigration surveys (trapping).

	Sagebrush Flat Wildlife Area	Washington Department of Fish and Wildlife

1990	Douglas County Pygmy Rabbit project approved by BPA
1992	Environmental Assessment completed with a Finding of No Significant Impact (DOE/EA-0791)
1992	WDFW adopted the Environmental Assessment pursuant to SEPA
1995	100 acres of agricultural land was converted to shrub-steppe
1997	WDFW prepared the Sagebrush Flat Mitigation Management Plan
1998	With BPA funding, purchased the MJM and Smith Units
1998	BPA approved the Mitigation Plan

9106100	Swanson Lakes Wildlife Area	Washington Department of Fish and Wildlife

1993	Acquisition of 10,399 acre Roloff property
1995	Acquisition of 5,060 acre Welch property
1995	Finch Management Unit - 240 acres permanently planted to small grains, 520 acres planted in native grass/forbs and 18,400 shrubs and trees planted.
1997	Roloff Management Unit - 15 acres permanently planted to small grains, 30 acres planted in native grass/forbs and 23,500 shrubs and trees planted.
1996	Roloff East Management Unit - 24,500 shrubs and trees planted
1997	Roloff West Management Unit - 40 acres planted to native grass/forbs and 15,000 shrubs and trees planted.
1997	Welch/Anderson Management Unit - 2,100 shrubs and trees planted.
1997	Tracy Rock Management Unit - 17,100 shrubs and trees planted.
1997	Established permanent monitoring and evaluation transects.
1996	Approximately 25 miles of new fence was constructed and major repair was completed for approximately 15 miles of fence.
1998	Cultural Resource Survey completed

1998	Fire protection contracts obtained	
9404300	Monitor, Evaluate, and Research the Lake Roosevelt Fishery	Spokane Tribe of Indians
1988	From 1988 to date, The Lake Roosevelt Monitoring Program (this project) began collecting baseline limnological, biological and fisheries data.	
1988	Under the auspices of the Lake Roosevelt Monitoring Program, established coordinated Fisheries Co-Managers of Lake Roosevelt among WDFW, CCT and STI.	
1988	Established communication with local and regional Columbia River stakeholders through special interest groups (i.e. CBFWA, NWPPC, Lake Roosevelt Forum) which continues to date.	
1990	Established hatchery reared kokanee and rainbow trout stocking goals based on food (zooplankton) availability. Set harvest goals based on stocking goals.	
1990	Established new walleye harvest regulations to maintain a harvestable population.	
1991	Spokane Tribal Hatchery began operation (managed by Spokane Tribe of Indians)	
1991	Annually monitor and evaluate the performance of fish from the hatcheries	
1992	Sherman Creek Hatchery began operation (managed by Washington Department of Fish and Wildlife)	
1992	Established time frame when kokanee are physiologically predisposed to forming an olfactory imprinted memory of the water, which they are reared in.	
1992	Discovered that kokanee exhibit weak smoltification characteristics, both physiologically and behaviorally, during their first year of life.	
1993	Surveyed the benthic macroinvertebrate community and estimated terrestrial macroinvertebrate deposition.	
1993	Established a relationship between water retention time and zooplankton production.	
1994	Participated in human health studies which investigated toxin loads (i.e. mercury, PCBs, dioxins and furans) in tissue of walleye, rainbow trout, kokanee and whitefish. Also, conducted surveys to estimate Lake Roosevelt fish consumption by anglers.	
1994	Imprint kokanee to a unique scent while being reared at the Spokane Tribal Hatchery, then released the same scent at Sherman Cr. during the kokanee spawning migration to increase the number of kokanee returning for egg collection to Sherman Cr.	
1994	Hatcheries changed kokanee stocking strategies by moving from fry to yearling releases.	
1994	Changed stocking period of net pen and hatchery reared rainbow trout from April to June.	
1994	Changed stocking period of hatchery reared kokanee from May to July.	
1994	Established the need to model the effects of hydro-operations and management actions on the ecosystem and fishery of Lake Roosevelt in the NWPPC Program, in order to create harmonized management objectives between lower and upper river stakeholders.	
1995	Established interim Lake Roosevelt hydro-operations rule curves in NWPPC Program	
1995	Became member of the TMT to participate with in-season hydro-operations decisions.	
1997	Intensified data collection to a level appropriate for modeling the effects of hydro-operations and potential management actions on the ecosystem and fishery of Lake Roosevelt.	
1998	In cooperation with the Sturgeon Project (BPA Project No.8605000) indexed the Lake Roosevelt sturgeon population.	
1998	Imposed new kokanee harvest regulations limiting angler harvest to hatchery fish only.	
9500900	Rainbow Trout Net Pen Rearing Project	Lake Roosevelt Development Association
1995	Began BPA funding process in April. Acquired NEPA exclusion, Received $8,000 to construct 150' of docks, purchase cable and build four new net pens. Rebuilt two pens at Hunters to increase active net pens from 18 to 24. Reared and released 330,000	
1996	Completed 140' of new dock and 6 net pens for Lincoln site. Completed 90' of dock and 4 net pens for Two Rivers Site. Transferred 540,000 Rbt from Spokane and Sherman Creek Hatcheries. Released 534,000 RBT.	
1997	Released 530,000 net pen rainbow. Replaced 60' of dock at Hall Creek; built 4 new replacement pens. Built 6 new pens for Kettle Falls Site. Replace two 20' dock sections at Kettle Falls Site.	
1998	Updated special use permits. Updated & repaired pens. Acquire two damaged boats from USFWS - work and repair by volunteers. Built 4 net pens for Kettle Falls-Sherman Creek Site. Participate in BPA sponsored "Big Horn Show" booth. Release 540,000 Rbt.	
9501100	Chief Joseph Kokanee Enhancement Project	Colville Confederated Tribes
1995	Collected field data, compiled report to BPA	

1996	Conducted field assessment of juvenile production, adult spawner returns, gill net survey and hydroacoustic monitoring of entrainment through Grand Coulee Dam	
1997	Same as above	
1998	Same as Above	
9700400	Resident Fish Stock Status Above Chief Joseph and Grand Coulee Dams	Kalispel Tribe of Indians
1997	Coordinated methods for blocked area fisheries assessments	
1997	Formalized blocked area coordination group represented by the Kalispel Natural Resource Department, Washington Department of Fish and Wildlife, Spokane Tribe or Indians, and Confederated Tribes of the Colville Reservation. Draft MOA.	
1998	Constructed data storage and analysis system	
1998	Box Canyon Reservoir migratory salmonid progress report.	
1998	Spokane River assessment, previously collected data, data gaps, recommended research.	
1998	Known Blocked Area fish distribution analysis based on previously collected data.	
8503800	Colville Tribal Fish Hatchery	Colville Confederated Tribes
1991	Reared and stocked 20,687 lb. of legal size rainbow trout (Mt. Whitney Stock).	
1991	Reared and stocked 17,123 lb. of subcatchable size rainbow trout (Goldendale stock).	
1991	Reared and stocked 8,679 lb. of fingerling size rainbow trout (Goldendale stock).	
1991	Reared and stocked 18,089 lb. of subcatchable size eastern brook trout (Owhi Lk. Stock).	
1991	Reared and stocked 1,659 lb. of fingerling size eastern brook trout (Owhi Lk. Stock).	
1991	Reared and stocked 5,812 lb. of subcatchable size lahontan cutthroat trout (Omak Lk. stock).	
1992	Reared and stocked 14,052 lb. of legal size rainbow trout (Eagle Lake stock).	
1992	Reared and stocked 10,076 lb. of subcatchable size rainbow trout (Goldendale stock).	
1992	Reared and stocked 2,413 lb. of fingerling size rainbow trout (Goldendale stock).	
1992	Reared and stocked 11,003 lb. of subcatchable size eastern brook trout (Owhi Lk. Stock).	
1992	Reared and stocked 2,292 lb. of fingerling size eastern brook trout (Owhi Lk. Stock).	
1992	Reared and stocked 4,554 lb. of subcatchable size lahontan cutthroat trout (Omak Lk. stock).	
1993	Stocking data unavailable	
1994	Reared and stocked 14,482 lb. of legal size rainbow trout (Mt. Whitney stock).	
1994	Reared and stocked 12,223 lb. of subcatchable size rainbow trout (Goldendale stock).	
	Reared and stocked 934 lb. of fingerling size rainbow trout (Goldendale stock).	
	Reared and stocked 14,695 lb. of subcatchable size eastern brook trout (Owhi Lk. Stock).	
	Reared and stocked 832 lb. of fingerling size eastern brook trout (Owhi Lk. Stock).	
	Reared and stocked 5,065 lb. of subcatchable size lahontan cutthroat trout (Omak Lk. stock).	
1995	Reared and stocked 11,789 lb. of subcatchable size rainbow trout (Goldendale stock).	
1995	Reared and stocked 14,500 lb. of legal size (5 fish/lb) rainbow trout (Mt. Whitney stock).	
1995	Reared and stocked 1,758 lb. of fingerling size (155 fish/lb) rainbow trout (Goldendale stock).	
1995	Reared and stocked 8,878 lb. of subcatchable size (31 fish/lb) eastern brook trout (Owhi Lk. Stock).	
1995	Reared and stocked 1,043 lb. of fingerling size eastern brook trout (Owhi Lk. Stock).	
1995	Reared and stocked 4,747 lb. of subcatchable size lahontan cutthroat trout (Omak Lk. stock).	
1995	Obtained 841,138 eastern brook trout eggs from Owhi Lk. broodstock.	
1995	Obtained 200,070 lahontan cutthroat trout eggs from Omak Lk. Broodstock.	
1995	Provided a tribal subsistence fishery on the Colville Reservation of .86 fish/hr CPUE.	
1995	Provided a recreational fishery on the Colville Reservation of .29 fish/hr. CPUE	
1995	Brook trout observed in the creel averaged 352mm with a condition factor of 126 x10-7	
1995	Rainbow trout observed in the creel averaged 283mm with a condition factor of 130 x 10-7	
1995	Prevented bacterial/viral outbreaks and minimize fin erosion during hatchery rearing.	
1995	35,000 sub-catchable brook trout and 100,000 lahontan cutthroat trout were stocked into Owhi lake and Omak Lake respectively during 1995. Bacterial/viral sampling continued during spawning operations to access broodstock health and results were negative.	
1995	Monitored and enumerated adult escapement of adfluvial rainbow trout in the SanPoil River Basin and stocked spring spawning Mt. Whitney Rainbow Trout into Round Lk., South Twin Lk. and North Twin Lk. (5,000, 23,122 and 23,118 fish respectively).	

1995 Participated in the CBFWA and Northwest Power Planning Council process for implementation of three projects funded through the NWPPC Fish and Wildlife Program.
1996 Reared and stocked 16,404 lb. (7,441 kg) of catchable size rainbow trout (Mt. Whitney stock).
1996 Reared and stocked 15,719 lb. of subcatchable size rainbow trout (Goldendale stock).
1996 Reared and stocked 10,152 lb. (4,605 kg) of subcatchable size eastern brook trout (Owhi Lk. Stock).
1996 Reared and stocked 5,668 lb. of subcatchable size lahontan cutthroat trout (Omak Lk. stock).
1996 Obtained 783,363 eastern brook trout eggs from Owhi Lk. broodstock.
1996 Obtained 265,160 lahontan cutthroat trout eggs from Omak Lk. Broodstock.
1996 Provided a tribal subsistence fishery on the Colville Reservation of 1.14 fish/hr CPUE.
1996 Provided a recreational fishery on the Colville Reservation of .28 fish/hr. CPUE
1996 Brook trout observed in the creel averaged 354mm with average condition factor of 123 x 10-7
1996 Rainbow trout observed in the creel averaged 317mm with condition factor of 129 x 10-7
1996 Prevented bacterial/viral outbreaks and minimize fin erosion during hatchery rearing.
1996 Stocked 29,938 sub-catchable brook trout and 177,356 lahontan cutthroat trout into Owhi lake and Omak Lake respectively. Broodstock bacterial/viral sampling continued during spawning operations and results were negative.
1996 Participated in the CBFWA and Northwest Power Planning Council process for implementation of three projects funded through the NWPPC Fish and Wildlife Program.
1997 Reared and stocked 12,637 lb. of catchable size rainbow trout (Mt. Whitney stock).
1997 Reared and stocked 13,038 lb. of subcatchable size rainbow trout (Goldendale stock).
1997 Reared and stocked 608 lb. of fingerling size rainbow trout (Goldendale stock).
1997 Reared and stocked 12,403 lb. of subcatchable size eastern brook trout (Owhi Lk. Stock).
1997 Reared and stocked 802 lb. of fingerling size eastern brook trout (Owhi Lk. Stock).
1997 Obtained 875,121 eastern brook trout eggs from Owhi Lk. broodstock.
1997 Obtained 265,000 lahontan cutthroat trout eggs from Omak Lk. Broodstock.
1997 Provided a tribal subsistence fishery on the Colville Reservation of .76 fish/hr CPUE.
1997 Provided a recreational fishery on the Colville Reservation of .31 fish/hr. CPUE
1997 Brook trout observed in the creel averaged 358mm with a condition factor of 126 x 10-7.
1997 Rainbow trout observed in the creel averaged 308mm with a condition factor of 123 x 10-7
1997 Reared all species components without bacterial/viral outbreaks with the exception of internal gut fungus in the legal rainbow trout component.
1997 Experimented with auto/demand and hand feeding techniques in an attempt to reduce fin erosion in rainbow trout.
1997 Experimented with auto/demand and hand feeding techniques in an attempt minimize domestication (behavorial responses).
1997 Stocked 34,929 sub-catchable brook trout and 0 lahontan cutthroat trout into Owhi lake and Omak Lake respectively (broodstock lakes). Bacterial/viral sampling continued and were negative.
1997 Successfully marked all broodyear 97 legal size rainbow trout to be stocked in the spring of 1998
1997 Participated in the CBFWA and Northwest Power Planning Council process for implementation of three projects funded through the NWPPC Fish and Wildlife Program.
1998 Production and fishery related 1998 data currently in the process of analysis.

9104600 Spokane Tribal (Galbraith Springs) Hatchery Operation & Maintenance Spokane Tribe of Indians

1990 Contractual Aggreement with the BPA for funding design, construction and operation and maintainenance (25 yr.) of Spokane Tribal Hatchery

Note: FDR & SCH are acronyms for Franklin D. Roosevelt Lake & Sherman Creek Hatchery.
1991 Construction of Spokane Tribal Hatchery and initial operation; 1,674,577 fingerling kokanee planted and 33,510 kokanee and 326,461 rainbow fingerlings transferred to FDR net pens.
1992 819,220 kokanee fingerlings & 71,256 kokanee yearlings planted; 1,099,000 fingerling & 68,552 yearlings kokanee transferred to SCH; 424,395 rainbow fingerlings transferred to FDR net pens.
1993 1,024,293 kokanee fingerlings & 21,190 kokanee yearlings planted; 635,267 fingerling & 72,508 yearling kokanee transferred to SCH; 40,305 kokanee & 446,798 rainbow fingerlings transferred to FDR net pens.
1994 540,220 kokanee fingerlings & 29,111 kokanee yearlings planted; 1,087,161 fingerling, 90,881 yearling kokanee & 60,534 fingerling rainbow transferred to SCH; 288,046 rainbow fingerlings transferred to FDR net pens.

1995	515,425 kokanee fingerlings & 59,825 kokanee yearlings planted; 210,634 yearling kokanee & 120,325 fingerling rainbow transferred to SCH; 164,328 kokanee & 288,739 rainbow fingerlings transferred to FDR net pens.
1996	54,194 kokanee yearlings planted; 224,562 yearling kokanee & 146,380 fingerling rainbow transferred to SCH; 50,899 kokanee & 430,473 rainbow fingerlings transferred to FDR net pens.
1997	381,513 kokanee fingerlings & 40,808 kokanee yearlings planted; 220,191 yearling kokanee & 150,801 fingerling rainbow transferred to SCH; 261,092 kokanee & 403,382 rainbow fingerlings transferred to FDR net pens.
1998	823,844 kokanee fingerlings & 84,066 kokanee yearlings planted; 349,832 kokanee & 255,712 rainbow fingerlings transferred to SCH; 294,186 kokanee & 311,594 rainbow fingerlings transferred to FDR net pens.

9104700	Sherman Creek Hatchery O&M	Washington Department of Fish and Wildlife

1992	Annual Operating Plan (AOP). Completed Annual Production Goals (APG): 1,022,639 kokanee salmon, (45,714 as yearling kokanee)
1993	AOP - Completed. APG: 988,070 kokanee salmon, (85,321 as yearling kokanee)
1994	AOP - Completed. APG: 1,072,921 kokanee salmon, (126,159 as yearling kokanee)
1995	AOP - Completed. APG: 275,609 yearling kokanee salmon and 101,116 rainbow trout
1996	AOP - Completed. APG: 286,253 yearling kokanee salmon and 142,072 rainbow trout
1997	AOP - Completed. APG: 265,313 yearling kokanee salmon and 140,359 rainbow trout
1998	AOP - Completed. APG: 487,000 yearling kokanee salmon and 195,000 rainbow trout

20509	Hellsgate Big Game Winter Range Umbrella Project	Colville Confederated Tribes

1993	Acquired W.K. property-4814 ac.
1995	Acquired H.K. property-4800 ac.
1995	Acquired Berg property-6300 ac.
1997	Acquired Nespelem Bend property-517 ac.
1997	Acquired Redford Canyon property-221 ac.
1998	Acquired Friedlander property-60 ac.
1998	Acquired Hinman property-770 ac.
1998	Acquired Sand Hills property-1030 ac.
1998	Conducted baseline HEP's (1993-1998) on acquisitions
1998	Implemented O & M on acquisitions (1993-1998)
1998	Implemented M & E on acquisitions (1993-1998)

9204800	Hellsgate Big Game Winter Range Operation and Maintenance Project	Colville Confederated Tribes

1993	Acquired and conducted HEP on 4814 ac.
1994	113 ac. treated for noxious weeds
1994	10 miles of boundary fence repaired
1995	Acquired and conducted HEP on 4800 ac.
1995	100 ac. treated for noxious weeds
1995	Acquired and conducted HEP on 6300 ac.
1996	200 ac. treated for noxious weeds
1996	2 miles of new boundary fence constructed
1996	10 miles of existing fences repaired
1997	Acquired and conducted HEP on 798 ac.
1997	257 ac. treated for noxious weeds
1997	2 miles of new boundary fence
1997	10 miles of existing fences repaired
1998	Acquired 1,800 ac.
1999	Conduct baseline HEP on new acquisition
1999	Maintain boundary fences
1999	Implemented M&E on all acquisitions (1993-1999)

9506700	Colville Tribes Performance Contract for Continuing Acquisition	Colville Confederated Tribes

1993-1998, we have acquired 18,512 acres of land for wildlife mitigation purposes. See umbrella proposal for details. Biological objectives are being met at acceptable levels for this stage of a very long-term project.

Coeur d'Alene Subbasin

9004401	Lake Creek Land Acquisition and Enhancement	Coeur d'Alene Tribe
1999	Complete Acquisition of Property	
1999	Protection of Project Lands	
9004402	Coeur D' Alene Tribe Trout Production Facility	Coeur d'Alene Tribe
1987	NPPC amended the F&W Program to include baseline stream surveys of tributaries located on the Coeur d'Alene Indian Reservation.	
1990	Conducted field surveys of Reservation streams.	
1990	Completed annual report which assessed the enhancement potential of Reservation streams for westslope cutthroat and bull trout.	
1991	Physical and biological surveys were completed on the ten tributaries identified for further study.	
1991	Used a modified Missouri method of evaluating streams in combination with information on biological indicators to select target tributaries for restoration and enhancement.	
1992	Began using watershed assessment techniques to describe watershed processes and resource conditions in target tributaries on the Coeur d'Alene Indian Reservation.	
1993	Conducted baseline population evaluations for westslope cutthroat trout and macroinvertebrates in each target tributary.	
1993	Identified limiting factors for westslope cutthroat and bull trout in target tributaries.	
1994	Developed recommendations to improve and protect habitat while increasing numbers of westslope cutthroat and bull trout in target tributaries.	
1994	Recommendations of the Coeur d'Alene Tribe were adopted by NPPC.	
1995	Priority areas for restoration were identified in the four target watersheds.	
1995	Initiated the first demonstration projects. Erected 2.8 km of exclusion fencing, installed bank protection structures, constructed pool habitat, and reestablished connections with historic floodplain channels at two locations.	
1995	Implemented the first compensatory harvest project by planting 1000 rainbow trout into Worley Pond.	
1996	Implemented additional demonstration projects. Erected 1.9 km of exclusion fencing, placed LWD in a 300 meter test reach, installed two current deflectors, and planted more than 9,000 trees and shrubs.	
1996	Maintained and stocked Worley Trout Pond with over 3000 rainbow trout.	
1997	Completed 5-year management plan for enhancement of Tribal fisheries.	
1997	Continued project implementation. Constructed and enhanced 4 acres of wetland habitat, constructed a side-channel rearing pond, built a bio-revetment to protect 100 meters of streambank, and planted more than 9,000 trees and shrubs.	
1997	Stocked Worley Pond with 2200 rainbow trout.	
1998	Constructed and enhanced 2 acres of wetland habitat and planted more than 9,000 trees and shrubs.	
1998	Initiated a gravel study in known spawning tributaries of each target watershed to quantify the quality and quantity of available spawning gravel.	
1998	Collected over 400 individual tissue samples from 13 location to determine stock purity and relatedness of westslope cutthroat trout stocks.	
1998	Stocked of Worley Pond with 1400 rainbow trout.	
1998	Coordinated field trips to restoration sites as part of Water Awareness Week during the past three years.	
1998	Completed supplementation feasibility report for westslope cutthroat trout on Coeur d'Alene Indian Reservation.	
1998	Compiled comprehensive lists of landowner contacts in each of the target watersheds.	
1999	Completed 4 additional trout ponds for stocking in FY 2000.	
1999	Completed hatchery Master Plan.	
1999	Completed hatchery NEPA process	
1999	Completed genetic analysis of cutthroat trout in reservation waters.	
9004400	Implement Fisheries Enhancement Opportunities: Coeur d'Alene Reservation	Coeur d'Alene Tribe
1987	NPPC amended the F&W Program to include baseline stream surveys of tributaries located on the Coeur d'Alene Indian Reservation.	

1990 Conducted field surveys of Reservation streams.
1990 Completed annual report which assessed the enhancement potential of Reservation streams for westslope cutthroat and bull trout.
1991 Physical and biological surveys were completed on the ten tributaries identified for further study.
1991 Used a modified Missouri method of evaluating streams in combination with information on biological indicators to select target tributaries for restoration and enhancement.
1992 Began using watershed assessment techniques to describe watershed processes and resource conditions in target tributaries on the Coeur d'Alene Indian Reservation.
1993 Conducted baseline population evaluations for westslope cutthroat trout and macroinvertebrates in each target tributary.
1993 Identified limiting factors for westslope cutthroat and bull trout in target tributaries.
1994 Developed recommendations to improve and protect habitat while increasing numbers of westslope cutthroat and bull trout in target tributaries.
1994 Recommendations of the Coeur d'Alene Tribe were adopted by NPPC.
1995 Priority areas for restoration were identified in the four target watersheds.
1995 Initiated the first demonstration projects. Erected 2.8 km of exclusion fencing, installed bank protection structures, constructed pool habitat, and reestablished connections with historic floodplain channels at two locations.
1995 Implemented the first compensatory harvest project by planting 1000 rainbow trout into Worley Pond.
1996 Implemented additional demonstration projects. Erected 1.9 km of exclusion fencing, placed LWD in a 300 meter test reach, installed two current deflectors, and planted more than 9,000 trees and shrubs.
1996 Maintained and stocked Worley Trout Pond with over 3000 rainbow trout.
1997 Completed 5-year management plan for enhancement of Tribal fisheries.
1997 Continued project implementation. Constructed and enhanced 4 acres of wetland habitat, constructed a side-channel rearing pond, built a bio-revetment to protect 100 meters of streambank, and planted more than 9,000 trees and shrubs.
1997 Stocked Worley Pond with 2200 rainbow trout.
1998 Constructed and enhanced 2 acres of wetland habitat and planted more than 9,000 trees and shrubs.
1998 Stocked of Worley Pond with 1400 rainbow trout.
1998 Compiled comprehensive lists of landowner contacts in each of the target watersheds.
1998 Initiated a gravel study in known spawning tributaries of each target watershed to quantify the quality and quantity of available spawning gravel.
1998 Collected over 400 individual tissue samples from 13 location to determine stock purity and relatedness of westslope cutthroat trout stocks.
1998 Completed supplementation feasibility report for westslope cutthroat trout on Coeur d'Alene Indian Reservation.

Lower Pend Oreille

9500100	Kalispel Tribe Resident Fish	Kalispel Tribe of Indians
1995	Assessed priority tributaries	
1995	Developed recommendations for tributary enhancement	
1995	Designed largemouth bass hatchery	
1995	Designed for brook trout removal	
1995	Developed recommendations for warmwater habitat enhancement	
1996	Constructed largemouth bass hatchery	
1996	Implement tributary enhancement measures	
1996	Implement brook trout removal	
1996	Implement warmwater habitat enhancement	
1997	Monitor and evaluate tributary enhancement	
1997	Monitor and evaluate warmwater habitat enhancement	
1999	Released 150,000 largemouth bass	
1999	Monitor and evaluate largemouth bass supplementation	
9700300	Box Canyon Watershed Project	Kalispel Tribe of Indians

1997	Coordinated with Washington State Department of Natural Resources (DNR), Natural Resource Conservation Service (NRCS), Pend Oreille County, Pend Oreille County Conservation District (POCD), and U.S. Forest Service (USFS) to develop cost share projects.	
1998	Completed the Cee Cee Ah Creek waterfall road closure and erosion project on DNR land. Implementation included reseeding eroded areas, replanting eroded and un-vegetated areas, water barring, hydrological alteration, and re-sloping landings. .	
1998	Completed the Papoose Road Habitat Project as a cost share project with the USFS in 1998. Project reduces sediment and improves fish habitat in major tributary to Cee Cee Ah Cr.	
1998	Completed the Skookum Creek riparian habitat enhancement project through the Pend Oreille Watershed Coordinating Committee in consultation with POCD, USFWS, and NRCS. Named "Wildlife Farm of 1998" for Washington state.	
9206100	Albeni Falls Wildlife Mitigation	Albeni Falls Interagency Work Group
1995	Completion of Albeni Falls Wildlife Mitigation Status Report	
1988	Completion of Albeni Falls Protection, Mitigation, and Enhancement Plan	
1996	Completion of Albeni Falls Wildlife Management Plan: Final Environmental Assessment	
1997	Protected 353 acres of high quality wetland habitat	
1998	Protected 110 acres of wetland habitat. Other acquistions are nearing completion.	
1998	Maintained 352 acres and 726 HUs.	
1999	Nearing completion on 400-acre acquistion.	
9106000	Pend Oreille Wetlands Wildlife Mitigation Project - Kalispel	Kalispel Tribe of Indians
1992	Land acquisition of 436 acre parcel for baseline protection of 371 HU's	
1993	Began management efforts on the project	
1994	Completed bio-engineered shoreline stabilization projects on highly eroded banks	
1995	Completed implementation of three wetland control structures for increased wetland quantity, quality, and diversity	
1996	Completed the construction of two nesting islands for waterfowl	
1997	Land acquisition of additional 164 acre adjjacent parcel for baseline protection of 246 HU's	
1997	Five-year HEP update on original purchase showing an increase of 182 HU's through management activities	
1998	Completed 25 acres of riparian cottonwood reforestation on the main acquisition site	
1998	Completed 30 acres of hardwood stand improvement on the main acquisition site	
1998	Completed the draft management plan for the additional parcel	

Upper Pend Oreille

9500100	Kalispel Tribe Resident Fish	Kalispel Tribe of Indians
1995	Assessed priority tributaries	
1995	Developed recommendations for tributary enhancement	
1995	Designed largemouth bass hatchery	
1995	Designed for brook trout removal	
1995	Developed recommendations for warmwater habitat enhancement	
1996	Constructed largemouth bass hatchery	
1996	Implement tributary enhancement measures	
1996	Implement brook trout removal	
1996	Implement warmwater habitat enhancement	
1997	Monitor and evaluate tributary enhancement	
1997	Monitor and evaluate warmwater habitat enhancement	
1999	Released 150,000 largemouth bass	
1999	Monitor and evaluate largemouth bass supplementation	
9404700	Lake Pend Oreille Fishery Recovery Project	Idaho Department of Fish and Game
1997	First year of project. US Army Corps successfully changed winter lake level.	
1997	Three University projects were started.	

1997	Kokanee population was successfully measured by hydroacoustics, trawling and spawner counts.
1997	Kokanee spawning activity was mapped on 100 miles of shoreline. Kokanee were documented to have moved into new shoreline areas for spawning and spread throughout the southern half of the lake.
1997	Depths of kokanee spawning were measured. Kokanee were found to have moved on to newly available gravel at shallower depths.
1997	Shrimp population was successfully measured by random sampling in three sections of lake. Shrimp population appears stable.
1998	Kokanee population successfully measured by trawling and hydroacoustics. Fry abundance very low.
1998	Graduate student study successfully shows that newly emerged kokanee do not starve because of competition with Mysis shrimp.
1998	Extensive sampling of shoreline spawning gravel shows very little siltation due to changing lake levels during first two years.

9700300	Box Canyon Watershed Project	Kalispel Tribe of Indians
1997	Coordinated with Washington State Department of Natural Resources (DNR), Natural Resource Conservation Service (NRCS), Pend Oreille County, Pend Oreille County Conservation District (POCD), and U.S. Forest Service (USFS) to develop cost share projects.	
1998	Completed the Cee Cee Ah Creek waterfall road closure and erosion project on DNR land. Implementation included reseeding eroded areas, replanting eroded and un-vegetated areas, water barring, hydrological alteration, and re-sloping landings. .	
1998	Completed the Papoose Road Habitat Project as a cost share project with the USFS in 1998. Project reduces sediment and improves fish habitat in major tributary to Cee Cee Ah Cr.	
1998	Completed the Skookum Creek riparian habitat enhancement project through the Pend Oreille Watershed Coordinating Committee in consultation with POCD, USFWS, and NRCS. Named "Wildlife Farm of 1998" for Washington state.	

9206100	Albeni Falls Wildlife Mitigation	Albeni Falls Interagency Work Group
1995	Completion of Albeni Falls Wildlife Mitigation Status Report	
1988	Completion of Albeni Falls Protection, Mitigation, and Enhancement Plan	
1996	Completion of Albeni Falls Wildlife Management Plan: Final Environmental Assessment	
1997	Protected 353 acres of high quality wetland habitat	
1998	Protected 110 acres of wetland habitat. Other acquisitions are nearing completion.	
1998	Maintained 352 acres and 726 HUs.	
1999	Nearing completion on 400-acre acquisition.	

9106000	Pend Oreille Wetlands Wildlife Mitigation Project - Kalispel	Kalispel Tribe of Indians
1992	Land acquisition of 436 acre parcel for baseline protection of 371 Hue’s	
1993	Began management efforts on the project	
1994	Completed bio-engineered shoreline stabilization projects on highly eroded banks	
1995	Completed implementation of three wetland control structures for increased wetland quantity, quality, and diversity	
1996	Completed the construction of two nesting islands for waterfowl	
1997	Land acquisition of additional 164 acre adjacent parcel for baseline protection of 246 HU's	
1997	Five-year HEP update on original purchase showing an increase of 182 HU's through management activities	
1998	Completed 25 acres of riparian cottonwood reforestation on the main acquisition site	
1998	Completed 30 acres of hardwood stand improvement on the main acquisition site	
1998	Completed the draft management plan for the additional parcel	

Kootenai Subbasin

20517	Libby Fisheries Mitigation	Montana Department of Fish, Wildlife and Parks
	See Umbrella Sub-proposals	

20028	Purchase Conservation Easement from Plum Creek Timber Company along Fisher	Montana Department of Fish, Wildlife and Parks
1998	Fisheries conservation easements included in Libby Fisheries Mitigation Plan	
8346700	Mitigation for the Construction and Operation of Libby Dam	Montana Department of Fish, Wildlife and Parks
1995	Developed a tiered (variable volume) approach for white sturgeon spawning flows balanced with reservoir IRCs and Snake River salmon biological opinion	
1998	Rehabilitated approximately 200' of Pipe Creek frontage to prevent further loss of habitat for bull trout and rainbow trout.	
1998	Developed on-site isolation facility for eventual brooding of inland rainbow trout.	
1989	The LRMOD and preliminary IRCs (called Biological Rule Curves) were first published in 1989 (Fraley et al. 1989), then refined in 1996 (Marotz et al. 1996).	
	A long-term database was established for monitoring populations of kokanee, bull trout, westslope cutthroat trout, rainbow trout and burbot and other native fish species, as well as zooplankton and trophic relations.	
1997	The effects of dam operation on benthic macroinvertebrates in the Kootenai River was assessed (Hauer et al. 1997) for comparison with conditions measured in the past (Perry and Huston 1983).	
1996	A model was calibrated to estimate the entrainment of fish and zooplankton through Libby Dam as related to hydro-operations and use of the selective withdrawal structure.	
1998	Chemically rehabilitated Carpenter Lake in northern Lincoln County to remove illegally introduced and stunted bluegill, largemouth bass, yellow perch, and northern pike populations.	
1997	Chemically rehabilitated Bootjack, Topless, and Cibid Lakes in eastern Lincoln Country to remove illegally introduced pumpkinseed and yellow perch.	
9401001	Mitigation for Excessive Drawdowns At Libby Reservoir	Montana Fish, Wildlife and Parks and Confederated Salish and Kootenai Tribes
1998	Completed geomorphic surveys of major portions of Libby and Big Cherry Creeks (key recovery area for bull and westslope cutthroat trout) necessary to remap floodplain and design a large-scale habitat restoration effort	
1998	Completed channel protection/ stabilization/ habitat restoration and migration barrier removal that connects and revitalized over 15 miles of critical westslope and bull trout habitat in key core recovery tributaries to Libby Reservoir	
1998	Continue trial of remote site incubators as a mechanism to improve the strength of native westslope cutthroat trout (WCT) populations in reservoir tributaries	
1998	Complete a cooperative watershed inventory of the Young Creek Drainage with USFS	
1996	Documented long-range, international migration of burbot from Libby Reservoir into Kootenai River in British Columbia	
1996	Collected burbot genetic samples for a cooperative (IDFG) analysis to compare Libby Reservoir burbot to populations in the Kootenai River of Idaho	
1997	Documented severe declines in native westslope cutthroat trout populations in tributaries to Libby Reservoir	
20005	West Fisher Watershed Restoration	U.S. Forest Service, Kootenai National Forest - Libby Ranger District
1996	USFS acquired 21,422 acres in numerous watersheds, including the West Fisher to provide for recovery of the grizzly bear.	
1997	USFS and PCTC complete 3,500 feet of stream channel stabilization to help lower fine sediment inputs and stabilize the channel at the major access road crossing.	
20049	Evaluate Sediment Transport in Spawning Habitat, Kootenai R., Idaho	U.S. Geological Survey
1997	Measured spatial distribution of stream velocities for the Kootenai River in the white sturgeon recruitment area during spawning. Results provided in U.S. Geological Survey Open-File Report 97-830.	
1998	Conducted a reconnaissance-level seismic survey and generated profiles of the substrate/subbottom in the recruitment area during spawning.	
9404900	Improve the Kootenai River Ecosystem	Kootenai Tribe of Idaho
1995	Completion of the "Kootenai River Biological Baseline Status Report"	
1996	Development of a working computer simulation model of the Kootenai River system	
1996	Completion of a one-year macroinvertebrate investigation	

1997	Completion of a water quality monitoring program on the Kootenai River	
1998	Completion of the macroinvertebrate investigation report "Kootenai River Macroinvertebrate Investigation"	
1998	Completion of the first year of a multi-year project to survey all the tributaries of the Kootenai River	
1998	Completion of the first season of evaluating biological and population parameter data for all fish species in the Kootenai River using electrofishing techniques	
9608720	Focus Watershed Coordination-Kootenai River Watershed	Montana Fish, Wildlife and Parks and Confederated Salish and Kootenai Tribes
1998	Formed or revitalized 5 citizen-based watershed planning organizations for five key sub-drainages in the basin completing one implementable watershed plan for Grave Creek and made important progress on four other plans	
1998	Secured FEMA funding ($400,000) for an effort by County, City, homeowners, USFS, NRCS, MFWP, USFWS, Montana DOT, local schools and several private organizations, to reconstruct a major portion of Parmenter Creek to a stable form	
1998	Coordinated a FEMA remapping of Libby, Big Cherry, Granite, Parmenter, Flower Creeks with the Libby Area Conservancy District, North Cabinet Conservancy District USACOE and USFS	
1998	Coordinated a Rosgen level III and IV geomorphic survey of Libby Creek and collection of cross sectional data needed to run HEC II modeling necessary to develop a channel design which will return much of Libby Creek to its proper functioning condition	
1998	Coordinated the development and design of implementable plans to screen bull trout from the Glen Lake Irrigation Ditch on Grave Creek, the most important bull trout spawning trib. in the U.S. portion of the Upper Kootenai.	
1998	Instituted and coordinated an international effort with BC Environment to monitor bull trout populations in the Wigwam River /Lake Koocanusa complex	
1998	Directed a morphological survey of the unstable lowest three miles of Grave Creek necessary to design a naturally functioning channel. The survey and design will give the local watershed group a critical tool to garner funding to implement the design.	
1998	Participated in initial planning for the rehabilitation of the tributaries to the Pleasant Valley Fisher River on the Lost Trail and Monk properties by the USFWS and NRSC	
1998	Directed surveys of upper Bobtail Creek necessary to design stream reconstruction to reduce bank erosion and improve habitat in cooperation with the Bobtail Creek Watershed group	
1998	Participated in developing a basin wide water quality monitoring strategy and "metadatabase" development as part of the Kootenai River Network (a private, non-profit forum supported by FWC includes state, provincial and private interests from basin)	
1998	Negotiated a 1.25 mile riparian corridor and channel reconstruction of Therriault Creek where the creek is currently deeply incised, and unstable (part of Tobacco River Drainage which also includes the important Grave and Sinclair Creeks)	
1998	Negotiated for the fencing and riparian planting of several miles of overgrazed westslope cutthroat trout habitat on Young Creek (important recovery tributary to reservoir) and won approval to reconstruct a one mile segment of channelized stream.	
1998	Initiated the halt of tributary stocking of fingerling westslope cutthroat trout into Young Creek and replaced this with remote site incubator (RSI) seeding of the creek.	
8806400	Kootenai River White Sturgeon Studies and Conservation Aquaculture	Kootenai Tribe of Idaho
1991	Monitored wild white sturgeon reproduction and recruitment	
1991	Built experimental hatchery	
1991	Produced white sturgeon offspring from wild adults	
1992	Produced white sturgeon offspring from wild adults	
1992	Released offspring from 1991 year class into the Kootenai River	
1993	Produced white sturgeon offspring from wild adults	
1993	Performed kokanee spawning surveys	
1994	Released offspring from 1992 year class into the Kootenai River	
1994	Monitored juvenile releases	
1994	Performed kokanee spawning surveys	
1995	Produced white sturgeon offspring from wild adults	

1995	Monitored wild sturgeon reproduction during experimental flow releases
1995	Performed kokanee spawning surveys
1996	Monitored wild sturgeon reproduction during experimental flow releases
1996	Spawned wild adult white sturgeon
1996	Performed kokanee spawning surveys
1997	Produced white sturgeon offspring from wild adults
1997	Monitored wild sturgeon reproduction during experimental flow releases
1997	Developed and implemented disease testing protocol for juvenile releases
1997	Developed and tested non-lethal sampling method for detection of white sturgeon iridovirus (WSIV)
1997	Released offspring from 1995 year class into the Kootenai River
1997	Developed methodology for field collection of sperm to reduce number of wild sturgeon transported to hatchery
1997	Monitored juvenile releases
1997	Performed kokanee spawning surveys
1997	Reintroduced kokanee eggs into two tributaries using in-stream incubation
1998	Began facility and water supply upgrades
1998	Produced white sturgeon offspring from wild adults
1998	Monitored juvenile releases
1998	Monitored wild sturgeon reproduction during experimental flow releases
1998	Reintroduced kokanee eggs into three tributaries using in-stream incubation

8806500	Kootenai River Fisheries Recovery Investigations	Idaho Department of Fish and Game

1995	Hypothesis developed inferring river flow impair burbot spawning migrations and fitness.
1997	Burbot in Kootenai River and Kootenay Lake genetically distinct from burbot above Kootenai Falls in Montana.
1997	Kootenai River white sturgeon spawning migration behavior and environmental variables modeled.
1998	Rainbow trout spawners in Deep Creek (major tributary to Kootenai River in Idaho) are adfluvial stock and juveniles seed lower river in Idaho and Kootenay Lake, B.C.
1998	Seismic studies of the Kootenai River subbottom indicates 5 m of coarse sand, no evidence of gravels or cobbles.

Flathead Subbasin

20554	Hungry Horse Fisheries Mitigation	(Umbrella)	Montana Department of Fish, Wildlife and Parks

See Umbrella Sub-proposals for Accomplishments of Individual Projects

9101901	Flathead Lake Monitoring and Habitat Enhancement	Confederated Salish and Kootenai Tribes

1998	Monitoring: Native species abundance trends in Flathead Lake.
1998	Monitoring: Measurement of physiological parameters of lake trout in Flathead Lake.
1998	Implementation: Channel reconstruction in Skidoo Creek to allow passage of fish through a culvert barrier.
1998	Planning: Progress Report summarizing data collected in Dayton Creek for the purpose of identifying restoration priorities.
1998	Planning: Coordination with MFWP in the preparation and submittal to NPPC of the Libby Mitigation Plan, Project # 9500400.
1998	Monitoring: Completion of six months of the yearlong Flathead Lake Creel survey.
1998	Monitoring: Annual summary report of monitoring of the results of the kokanee supplementation experiment.
1995	Implementation: Reconstruction of groundwater seepage on Polson Golf Course into a stream channel flowing into Flathead Lake.
1994	Monitoring: Lake-wide yearlong creel survey

9101903	Hungry Horse Mitigation - Watershed Restoration & Monitoring (MFWP Umbrella	Montana Department of Fish, Wildlife and Parks

1991	Completed study examining enhancement of benthic insect production in Hungry Horse Reservoir through slash pile installation.

1992 Completed brook trout eradication and habitat enhancement project at Elliott Creek, a direct Flathead River tributary.
1991 Completed thermal modeling and installation of selective withdrawal structures on Hungry Horse Dam to restore normative river temperatures (Marotz et al. 1994).
1992 Completed chemical rehabilitation of Lion Lake. Removed illegally introduced perch & pumpkinseed (potential contaminants) from lake ~ 2 mi from H.H. Reservoir.
1992 Completed development of Integrated Rule Curves (IRCs) for Hungry Horse Reservoir (Marotz et al. 1996).
1993 Completed off-site chemical rehabilitation of Rogers Lake. Removed perch and reestablished cutthroat trout and arctic grayling. Lake now genetic reserve for Red Rocks Lake strain arctic grayling.
1994 Devine Lake Chemical Rehabilitation
1994 Completed bank stabilization and sediment abatement project at Big Creek. Major bull trout spawning reach lies downstream.
1994 Completed cooperative culvert improvement projects on 7 Hungry Horse Reservoir tributaries to eliminate passage barriers for adfluvial cutthroat trout
1995 Completed willow survival experiments in drawdown zone of H.H. Reservoir. Examined methods for re-establishing vegetation on reservoir margins.
1995 Completed sediment source surveys on road systems associated with the 6 major (direct) bull trout spawning tributaries for Hungry Horse Reservoir.
1995 Completed fish passage and habitat enhancement project at Hay Creek (North Fork Flathead River tributary).
1996 Completed fish ladder at Taylor's Outflow to allow access for cutthroat trout from Flathead System to spawning tributary.
1996 Completed off-site chemical rehabilitation of Bootjack Lake.
1996 Completed channel reconstruction of ~2 km of Taylor's Outflow spring creek
1997 Completed food habits study for lake trout in Flathead Lake
1997 Completed off-site chemical rehabilitation of Murray and Dollar Lakes.
1998 Completed Griffin Creek fencing project. Excluded cattle from ~8 km of stream with genetically pure cutthroat population.
1998 Completed off-site chemical rehabilitation of Little McGregor Lake.
1998 Completed study quantifying zooplankton entrainment at Hungry Horse Dam under different operational scenarios using selective withdrawal (Cavigli et al. 1998).
1997 Completed construction on Crossover Wetlands Project

9101904	Hungry Horse Mitigation - Nonnative Fish Removal / Hatchery Production	U.S. Fish and Wildlife Service

1993 Initiate hatchery component of 5-year kokanee stocking and monitoring program.
1993 Initiate bull trout experimental hatchery development and research.
1995 Develop kokanee broodstock.
1997 Initiate offsite westslope cutthroat and rainbow trout stocking.
1997 Initiate bull trout experimental culture development.
1997 Develop Sekokini Springs Natural Rearing Facility fish culture program.
1998 Evaluate success of kokanee program.

9401002	Flathead River Native Species Project (MFWP Sub-proposal)	Montana Department of Fish, Wildlife and Parks

1995 Completed cooperative culvert improvement project on Margaret Creek, a direct tributary of Hungry Horse Reservoir.
1995 Completed cooperative sediment source surveys in drainages along Hungry Horse Reservoir containing bull trout spawning and rearing tributaries.
1995 Completed pilot food habits study examining predation of native salmonids by lake trout and northern squawfish in the Flathead River.
1996 Completed cooperative culvert improvement project on Murray Creek, a direct tributary of Hungry Horse Reservoir.
1996 Completed cooperative culvert improvement project on Riverside Creek, a direct tributary of Hungry Horse Reservoir.
1996 Completed cooperative baseline data collection of bull trout spawning habitat quality and utilization in reservoir and backcountry tributaries of the South Fork Flathead River.

1997	Completed cooperative culvert improvement project on Harris Creek, a direct tributary of Hungry Horse Reservoir.	
1997	Completed cooperative culvert improvement project on Felix Creek, a direct tributary of Hungry Horse Reservoir.	
1998	Completed development of radio-telemetry monitoring system for the Flathead River.	
1998	Completed construction of Crossover Creek Wetlands Project in cooperation with project 9101903.	
9502500	Flathead River Instream Flow Project (Mfwp Umbrella Subproposal)	Montana Department of Fish, Wildlife and Parks
1997	Project proposal approved by CBFWA and ISAB for funding in FY98 to initiate 3 year project.	
1998	Second year approved by CBFWA and ISRP, FY99.	
1999	Contractor will be selected through ongoing RFP process. Work to begin spring 1999.	
9608701	Focus Watershed Coordination-Flathead River Watershed	Confederated Salish and Kootenai Tribes
1998	Published Dayton Creek Watershed Restoration Progress Report	
1998	Contributed cost-share to Small Landowner workshop sponsored by Montana DNRC.	
1998	Contributed cost-share to FBC, Voluntary Monitoring Program. Other contributors include Montana Watercourse.	
1998	Revised grazing plan, built riparian and headwater fence in East Valley Creek.	
1998	Contributed cost-share (along with NRCS, USFWS, Pheasants Forever, Montana Watershed Inc. landowners, and Lake Co. Conservation District in Valley View to exclude stock from two irrigation canals/creeks entering Flathead River.	
1998	Received cost-share grant from Fish America Foundation for road obliteration in Valley Creek drainage. This matched federal Jobs in the Woods monies and Salish-Kootenai College equipment time.	
1998	Received challenge grant from Bring Back the Natives for on-the-ground work in Valley Creek or Jocko River drainage.	
1998	Contributed cost-share to stream restoration project on Mission Creek (purchased culvert).	

Lower Snake Mainstem Subbasin

9202409	Enhance Conser. Enforcement for Fish & Wildlife, Watersheds of the Nez Perce	Nez Perce Tribe
1996	Successful formation of fisheries enforcement program, fielded uniformed tribal officers for the first time in tribal history.	
1997	Fisheries Enforcement Program now officially providing enforcement of tribal regs on the protection of resident fish, wildlife, and their habitats	
1998	Provided required basic training of all programs sworn personnel.	
9700900	Evaluate Rebuilding the White Sturgeon Population in the Lower Snake Basin	Nez Perce Tribe
1996	Completion of a Biological Risk Assessment (Carmichael et al. 1997)	
1997	Completion of a Multi-year Research Plan (Hoefs 1998)	
1998	1997 Annual Report	
9801004	M&E of Yearling Snake R. Fall Chinook Released Upstream of Lower Granite	Nez Perce Tribe
1998	PIT tagged and released 9,942 yearling chinook at the Pittsburg Landing facility, 7,458 at the Big Canyon facility, and 1,253 at the Captain John Rapids facility in cooperation with the USFWS and WDFW.	
1998	Radio tagged and released 50 yearling chinook at each the Pittsburg Landing, Big Canyon Creek, and Captain John Rapids facilities.	
1998	Yearling chinook health assessments were performed at the Pittsburg Landing, Big Canyon Creek, and Captain John Rapids facilities by the USFWS.	
1998	62 adult fall chinook from the acclimation facilities were radio tagged at Lower Granite Dam by the USFWS.	

1997	PIT tagged and released 9,916 yearling chinook at the Pittsburg Landing facility and 10,051 at the Big Canyon facility in cooperation with the USFWS and WDFW.
1997	Radio tagged and released 98 yearling chinook at the Pittsburg Landing facility and 97 at Big Canyon Creek.
1997	Yearling chinook health assessments were performed at the Pittsburg Landing and Big Canyon Creek facilities by the USFWS.
1997	16 adult fall chinook from the acclimation facilities were radio tagged at Lower Granite Dam by the USFWS.
1996	PIT tagged and released 12,421 yearling chinook at the Pittsburg Landing facility in cooperation with the USFWS.

9801005	Pittsburg Landing, Capt. John Rapids, Big Canyon Acclimation Facilities	Nez Perce Tribe

1996	Pittsburg Landing assembled and operated, 114K yearlings released.
1997	Pittsburg Landing operated, 147K yearlings acclimated and released.
	Big Canyon assembled and operated, 198K yearlings and 253K subyearlings acclimated and released.
1998	Pittsburg Landing operated, 124K yearlings acclimated and released.
	Big Canyon operated, 61K yearlings acclimated and released.
	Capt. John Rapids constructed and operated, 133K yearlings acclimated and released.

92-84 The Oregon Trust Agreement Planning Project

1992	Initiated to identify potential mitigation sites through Oregon and to estimate costs for fully mitigation Oregon wildlife losses.
1993	Completed project identified 287 potential wildlife mitigation sites throughout Oregon. Estimated costs for full mitigation averaged $250 million.
95-65	Assessing Oregon Trust Agreement Planning Project Using Gap Analysis: Potential mitigation impacts for the impacts to Oregon wildlife resources associated with relevant mainstem Columbia River and Willamette River hydroelectric projects
1995	Project initiated to re-evaluate and prioritize potential mitigation sites throughout Oregon.
1997	Draft results provided prioritized list of mitigation sites.

9705900 Securing Wildlife Mitigation Sites – Oregon

1998	The Oregon Wildlife Coalition developed and submitted a programmatic project proposal for FY1999 funds. This proposal explained intent for mitigation planning, coordination, and implementation by Oregon wildlife managers within Oregon and identified priority projects for FY1999 with specific budgets to help meet wildlife mitigation objectives.
1998	Project was recommended by the NPPC for $4 million.
1998	Efforts to implement individual mitigation projects occurred.

Tucannon Subbasin

9401806	Implement Tucannon River Watershed Plan to Restore Salmonid Habitat	Columbia Conservation District

1996	Completed Final Draft of Tucannon River Model Watershed Plan
	Installed 20 instream habitat projects: Utilizing 5 funding sources working with 12 landowners
1997	Dormant Stock Plantings on 1996 Project sites
	Installed 12 instream habitat projects utilizing 5 funding sources and 12 landowners
	Performed O&M on 5 1996 projects to repair flood damage - projects cost-shared
1998	Dormant Stock Plantings on 1997 Projects
	Installed 12 instream habitat projects utilizing 6 funding sources and 8 landowners including the WDFW
	Performed O&M on 2 1997 projects- enhanced project to ensure integrity

9401807	Continue With Implementation of Pataha Creek Model Watershed Projects	Pomeroy Conservation District

1994	Initiated Collaboration with Citizens and Agency Representatives on salmon issue in Pataha Creek Watershed
1995	Pataha Creek Riparian Fencing Demonstration Project
1995	Continue plan research and development

1996	Fish Aquarium and education program for Pomeroy Grade School
1996	Continue plan research and development
1996	Began cost-share program by installing upland and riparian practices for bank stability and erosion reduction
1996	Involved local schools in tree planting, invertebrate education
1997	Continued plan research and development
1997	ISCO samplers and temperature monitoring devices deployed in lower and upper Pataha Creek
1997	Continued installation of upland and riparian practices for bank stability and erosion reduction using cost share incentive program.
1998	Draft of Pataha Creek Model Watershed Plan printed.
1998	Database being built from ISCO sampling with testing for total suspended solids. Temperature monitoring ongoing.
1998	Continued installation of upland and riparian practices for bank stability and erosion reduction using cost share incentive program.
1998	FY 99 summary of installation of practices to date
1998	Contracted with WSU for additional monitoring of water quality, invertebrates and upland erosion control practices.

8909600	Monitor and evaluate genetic characteristics of supplemented salmon & stlhd	National Marine Fisheries Service

1989	Tissue samples taken for genetic monitoring and logged into the collection at NWFSC represent a major component of the largest tissue repository available for Pacific salmon (>18,000 samples)
1991	High levels of genetic variability documented within and among Snake River chinook salmon and steelhead populations. This variability shown to be stable through time.
1991	Allozyme data supported distinctiveness of Dworshak Hatchery steelhead. Distinctiveness appeared to be ancestral.
1991	Estimation of Nm and the critical ratio of Nb/N
1996	Allozyme data played a critical role in the US v. Oregon dispute resolution
1995	New restriction site markers developed for nuclear DNA loci. >95 primer pairs have been made for introns, 3' & 5' untranslated regions, random clones, and other noncoding sequences.
1995	Groups of microsatellite markers (multiplex sets) developed and implemented in both chinook salmon and steelhead, permitting rapid and efficient genotyping. >90 microsatellite primer pairs made.
1996	DNA markers (nonlethally analyzed) provided information on the relative distinctiveness of NE Oregon spring chinook salmon captive brood stock collections as compared to the Rapid River stock spawned at Lookingglass hatchery
1998	DNA data helped evaluate potential distinctiveness of marked and unmarked fish returning to the trap at the Rapid River Hatchery
1998	Developed an analytical solution for the Phelps/Allendorf effect, a common sampling problem associated with the collection of juveniles when population sizes are small
1996	Technological developments in the rapid assay of single nucleotide polymorphisms (SNPs)
1998	Development of DNA extraction and genotyping of historic scale samples.

90-53	Investigations of bull trout, steelhead trout, and spring chinook salmon interactions in southeast Washington.

1991	Began the study on 4 streams (including the Tucannon River). Collected bull trout life history and habitat use data and compared that information with information available or collected under this study for steelhead and spring chinook.
1992	Continued study. Provided annual report
1995	Completed final report.

Clearwater Subbasin

20541	Snake River Fall Chinook Salmon Studies (Umbrella Proposal)	Nez Perce Tribe
	See individual subproposals	
9403400	Assessing Summer and Fall Chinook Restoration in the Snake River Basin	Nez Perce Tribe

1994	Determined the chinook salmon optimal spawning timing window based on water temperatures in the upper Clearwater River and principal tributaries, Grande Ronde, Salmon, and Imnaha Rivers
1994	Evaluated the quantity and quality of chinook spawning habitat in the upper mainstem Clearwater, Middle Fork Clearwater, and lower sections of South Fork Clearwater, Selway, and Lochsa
1994	Determine the extent of current fall chinook spawning activity and hatchery contributions in the Clearwater and major tributaries, Grande Ronde, and Salmon Rivers and coordinate redd locations on the Imnaha River with the USFWS and Idaho Power Company
1994	Describe fall chinook life history strategies (emergence timing, growth rates, emigration timing and survival) in the Clearwater and Grande Ronde Rivers
1995	Provided an annual report on the results of the first year of study
1996	Evaluated the quantity and quality of chinook spawning habitat in the lower Grande Ronde, Salmon, and Imnaha Rivers
1997	Described the movement patterns, growth rates and emigration survival of Lyons Ferry Hatchery fall chinook released in the Clearwater River
1997	Prepared a cooperative BPA report with NMFS and USFWS
1998	Collected a subsample of wild subyearling chinook salmon from the Clearwater and Grande Ronde Rivers to determine fall chinook stock structure through genetic analysis
1998	Provided a 1995-96 report to BPA

9801003	Spawning Distribution of Snake River Fall Chinook Salmon	U.S. Fish and Wildlife Service

1997	Installed telemetry tracking system.
1997	Tagged and tracked first returns from the first release of hatchery yearlings in the Snake River upriver of Lower Granite Dam. Found the telemetry tracking system worked as planned.
1997	Documented the spawning distribution of fall chinook salmon based on redd counts.
1998	Tagged, and are currently tracking, one- and two-ocean fall chinook salmon that were released as juveniles in the Snake and Clearwater rivers, upriver of Lower Granite Dam. These activities are progressing as scheduled.
1998	Redd searches are progressing as scheduled.

20080	Evaluate a Modified Feeding Strategy to Reduce Residualism and Promote Smol	U.S. Fish and Wildlife Service - Idaho Fishery Resource Office

	Completed unfunded pilot study*

8335000	Nez Perce Tribal Hatchery	Nez Perce Tribe

1992	Developed the NPTH Master Plan
1992	Completed a Genetic Risk Assessment for the NPTH Master Plan.
1993	Completed the Selway River Genetic Resource Risk Assessment
1993	Outplanted 114,000 spring chinook parr in Meadow Creek, tributary of Selway River.
1994	Completed NPTH Predesign Study.
1994	Outplanted 500,000 spring chinook parr in Meadow Creek, Warm Springs Creek & Boulder Creek.
1995	Completed supplement to NPTH Master Plan
1995	Completed cultural and archeological surveys
1996	Completed the Monitoring and Evaluation Plan
1996	Completed the Broodstock Management Plan
1997	Completed the Final Environmental Impact Statement and Record of Decision
1997	Received the Biological Opinion for NPTH.
1997	Completed the Independent Scientific Review
1997	Spring chinook broodstock development initiated for NPTH from 1997 brood year.
1999	Planned completion of NPTH Final Design.
1999	Planned completion of Coho Master Plan amendment to NPTH.
1999	Planned completion of Fall Chinook Benefit Risk Assessment

8335003	Nez Perce Tribal Hatchery Monitoring and Evaluation	Nez Perce Tribe

1993	Initiated ongoing baseline data (parr densities, juvenile emigration, spawning ground surveys)
1993	Results of Meadow Creek Fish Trapping, Fall 1993 (Johnson 1993)
1996	Completion of Monitoring and Evaluation Plan (Steward 1996)
1995	Habitat condition report
1996	Initiated adult escapement analysis (Lolo Creek)

1997	Results of Meadow Creek Fish Trapping for the 1995 Migratory year (Sprague and Johnson 1997)	
1997	Steam Conditions and Salmonid Abundance - Meadow Creek (Selway)	
1997	Aerial Photographs of Meadow Creek (Selway) (Clearwater Biostudies)	
1997	Aerial Photographs of Meadow Creek (Selway)	
9501300	Nez Perce Tribe Resident Fish Substitution Program	Nez Perce Tribe
1997	Completed restoration of the Talmaks Reservoir fishery	
1998	Completed restoration of Mud Springs Reservoir fishery	
1998	Identified Cold Springs and Deer Creek fishery sites. Collected environmental and cultural information needed to assess site suitability, develop engineering designs, and compile NEPA documentation	
9608600	Clearwater Subbasin Focus Watershed Program - ISCC	Idaho Soil Conservation Commission
1997	Completed inventory needs from existing data for Focus Program development FWP Section 7.7B.2	
1998	Coordinated Little Canyon Creek project development	
1998	Coordinated Nichols Canyon project development	
9706000	Clearwater Subbasin Focus Watershed Program - NPT	Nez Perce Tribe
1996	Coordinate Salmon Corps to remove six miles of barb-wire and rail fence	
1996	Coordinate Salmon Corps to stabilize landslide.	
1997	Coordinate with Clearwater and Nez Perce National Forests to develop Cost-Share Agreements/Memorandum of Understanding	
1997	Coordinate with Clearwater National Forest (CNF) to plan/implement road obliteration within the Squaw, Papoose, and Lolo Creek Watersheds.	
1997	Coordinate with CNF to design/construct riparian/meadow protection fence.	
1997	Coordinate with Nez Perce National Forest (NPNF) to design/construct riparian/meadow protection fence.	
1998	Coordinate with CNF, Potlatch Corporation, Idaho Dept. of Lands, and private grazing permittees to develop a Challenge Cost Share Agreement.	
1998	Coordinate with above stated agencies to design/implement construction of riparian protection fence.	
1998	Coordinate with consultant and contractor to install two cattle guards and one off-site watering development for cattle in the uplands	
1998	Coordinate with NPNF to install water table wells in McComas Meadows to monitor the groundwater levels associated with meadow/wetland rehabilitation.	
1998	Monitoring of fence construction to ensure over-winter survival and human impacts are repaired.	
9901400	Restore Anadromous Fish Habitat in the Little Canyon Creek Subwatershed	Clearwater Focus Watershed Program - Idaho Soil Conservation Commission
	Implementation of Fiscal Year 1999 will begin later in the fiscal year.	
9901500	Restore Anadromous Fish Habitat in the Nichols Canyon Subwatershed	Clearwater Focus Watershed Program - Idaho Soil Conservation Commission
	Implementation of Fiscal Year 1999 will begin later in the fiscal year.	
9303501	Enhance Fish, Riparian, and Wildlife Habitat Within the Red River Watershed	Idaho County Soil and Water Conservation District
1993	Collaborative purchase of one land parcel in the lower Red River meadow; property deeded over to IDFG in an interagency MOA between IDFG and BPA to manage property as a Wildlife Management Area for habitat restoration and fish and wildlife benefits.	
1994	Surveys of existing conditions; research of historical conditions; planning and project vision discussions with interagency and tribal technical advisory committee; consensus on habitat restoration design philosophy; and budget development.	
1995	NEPA assessment; analysis of restoration options; design criteria established and conceptual restoration designs completed for Phases I and II.	
1996	Final engineering drawing package completed for Phase I and permits obtained; implementation of Phase I of restoration design; began conceptual designs and planning for Phase II	
1997	Final engineering drawing package completed for Phase II and permits obtained; Phase II of restoration design implemented; revegetation completed in Phase I; implementation and post-construction monitoring completed; initial planning for Phase III.	

1998	Surveying, data collection, computer-modeling and preliminary conceptual designs completed for Phases III and IV; revegetation completed for Phase II; turbidity test completed; post-construction monitoring performed; 1997 monitoring report completed.	
20086	Rehabilitate Newsome Creek - S.F. Clearwater River	Nez Perce Tribe
1996	Created a sediment trap and revegetated placer mine.	
1998	U.S. Forest Service placed in-stream structures in Newsome Creek.	
9607708	Protect and Restore the Lolo Creek Watershed	Nez Perce Tribe
1997	Construct 3.1 miles of fence for riparian and cultural protection.	
1997	Construct 0.5 miles fence to protect a prime spawning area	
1997	Completed 12 miles of road obliteration consisting of erosion control, re-vegetation, fertilizing, and placing of woody debris.	
1998	Maintenance and monitoring of construction of 3.1 miles of riparian fence.	
1998	Construction of 10 miles of riparian protection fence.	
1998	Installation of two cattle guards.	
1998	Installation of one off-site watering development to keep grazing in the uplands and out of the riparian areas.	
1998	Completed 15 miles of road obliteration, consisting of contouring the roadbeds back to their natural slope, re-vegetation, fertilization, and placing of woody debris.	
9607709	Protect and Restore the Squaw to Papoose Creeks Watersheds	Nez Perce Tribe
1996	Stabilized 3 landslides.	
1996	Unplugged 5 culverts.	
1996	Placed large woody debris in-stream.	
1996	Re-vegetated 1 mile of stream banks.	
1997	Obliterated 9 miles of system/non-system roads.	
1998	Obliterated 12 miles of system/non-system roads.	
9607711	Restore McComas Meadow/ Meadow Creek Watershed	Nez Perce Tribe
1996	Salmon Corps removes 4 miles of posts, rails, and barb wire fence	
1997	Construct 3.0 miles of riparian fence	
1998	Finish fence construction (0.5 miles)	
1998	Monitor existing riparian fence	
1998	Install water table wells for groundwater monitoring	
9901600	Protect & Restore Big Canyon Creek Watershed	Nez Perce Tribe
1999	Completed watershed assessment on Big Canyon Creek.	
9901700	Protect & Restore Lapwai Creek	Nez Perce Tribe
1999	Completed a watershed assessment on Lapwai Creek	
8709900	Dworshak Dam Impacts Assessment and Fisheries Investigation	Idaho Department of Fish and Game
1990	Reservoir fishery documented.	
1993	Fishery objectives defined for waters of this type and productivity. Published in Rieman and Maiolie 1995.	
1993	Selector gates on dam successfully used to minimize entrainment losses during a year of low winter flow.	
1994	Selector gates on dam utilized to avoid kokanee losses during winter of low flow.	
1995	Selector gates again utilized to avoid kokanee losses during winter of low flow.	
1995	Eighty-foot drawdowns of reservoir to provide anadromous fish flows were found to have minimal impacts on the kokanee population.	
1996	We successfully monitored kokanee abundance in the reservoir throughout the year and during a flood event when selector gates could not be used due to low pool elevation.	
1997	Strobe light testing began. Kokanee repelled by lights during open water tests on free ranging fish.	
1998	Winter strobe light test conducted and found to be even more effective than during summer.	
1998	Tests conducted with downward pointing strobe lights were found to repel kokanee.	
8740700	Dworshak Impacts/M&E and Biological/Integrated Rule Curves	Nez Perce Tribe
1993	Joint NPT/IDFG report leading to cessation of smallmouth bass minimum size limits for Dworshak Reservoir.	
1993	Identification of causative operational factors pertaining to the decline of the redside shiner population in Dworshak Reservoir.	
1993	Identification of broad biologically based criteria for Dworshak Reservoir operations.	

1993 Change in fisheries management approach to minimize stocking of exotic rainbow trout to avoid potential genetic introgression of native westslope cutthroat trout.
1994 Identification of potential temperature/oxygen barriers to migrating kokanee, and possibly bull trout, resulting from summer drawdown operations for anadromous fish flow augmentation.
1996 A draft report from contractor characterizing and evaluating limnological conditions in Dworshak Reservoir under various operating conditions from 1993-1995.
1997 Summary report identifying information collected to date for integrated rule curve development.
1998 Scope and develop preliminary operational relationships preparatory to integrated rule curve modeling.

Asotin Subbasin

1991 - Asotin Creek Water Quality Monitoring Project
1993 - Initiated Collaboration with Citizens and Agency Representatives on Sensitive Fish and Wildlife Resource Issues
1994 – Agricultural Collaboration with citizens and agency represenatives on sensitive fish and wildlife resource issues
1994 – Continued intensive tree planting efforts on Asotin Creek and its tributaries
1994 – Completed watershed analysis for Asotin Creek watershed
1995 – ISCO water sampling units and HOBO temperature meters deployed throughout the watershed
1995 - Bonneville Early Action Projects completed on Asotin Creek
1995 – *Asotin Creek Model Watershed Plan* completed and printed
1995 – Contined tree planting efforts with local schools, Boy Scouts, Girl Scouts and volunteers
1995 – WCC grant funding for upland and riparian restoration projects in Asotin Creek watershed from the WA State Legislature
1995 – Frost free watering troughs installed at three locations in watershed
1996 – Continue water quality and temperature and monitoring throughout watershed
1996 – Continue tree planting efforts with local schools and volunteer groups
1996 – Initiated Bonneville Early Action in-stream habitat restoration projects
1996 – Implemented Headgate Park pre- and post- monitoring of habitat restoration projects funded by WCC
1997 – Completed technical report for Headgate Park pre- and post-habitat and resulting changes in pool habitat avalability and abundance of juvenile steelhead
1997 – Continued tree planting projects
1997 – Bonneville funding used for upland and riparian habitat restoration projects
1997 – WCC funding for upland sediment reduction practices in watershed
1997 – Initiated Natural Resource Conservation Service (NRCS) and ACCD Meander Reconstruction habitat monitoring
1997 – Completed 11 channel and fish habitat improvement projects on Asotin Creek
1997 – Completed 54 sediment basin cleanouts in Asotin County
1997 – Completed 5 riparian fencing projects on Asotin Creek
1997 – Supplied four aquariums to local schools for “Salmon in Classroom” project
1997 – Completed two brush revetment / streambank protection projects with students
1997 – “*Model Watershed Newsletter”* receives 3rd place in national competetion
1998 – Held first Envirothon competition for local schools
1998 – Intensive tree planting efforts using mechanical means to plant willow and cottonwood trees. Students and volunteers planted rooted stock such as pondersa pine and blue elderberry
1998 – Continue Headgate Park post-habitat restoration monitoring
1998 – Continued Bonneville funding for upland sediment reduction, riparian/floodplain management and in-stream restoration projects
1998 – Initiated water quality and storm event sampling on Asotin Creek with Washington State University (WSU)

1998 – Initiated WDFW pre- and post- habitat restoration monitoring
1998 – Completed reports for 1997 Bonneville Habitat Restoration Projects including photo documentation, expected benefits, description and costs
1998 – Completed aerial surveys of upland and riparian habitat restoration projects and photo documentation
1998 – Initiated NRCS and ACCD sediment basin monitoring funded by WCC
1998 – Continued NRCS and ACCD Meander Reconstruction monitoring
1998 – Completed 19 fish habitat restoration projects in Asotin Creek watershed
1998 – Completed 6 riparian fencing projects along Asotin Creek
1998 – Completed 18 sediment basin cleanouts in Asotin Creek watershed
1999 – Intiating natural resource newsletter for 4th – 6th graders in Asotin County Schools

Salmon Subbasin

20545	Idaho Supplementation Studies - Umbrella Proposal	Idaho Department of Fish and Game
1991	Identified study areas, brood stocks, facilities to be used.	
1991	Brood stock development	
1992	Begin supplementation and monitoring of treatment streams, and monitoring of control streams.	
1996	Small scale investigations into chinook salmon supplementation strategies and techniques: 1992-1994. Technical Report. Peery, C.A. and T.C. Bjornn.	
1997	First generation returns, a known brood stock for supplementation is established.	
1998	Five-year Report (1991-1996) in progress.	

8909800	Idaho Supplementation Studies	Idaho Department of Fish and Game
1991	Identified study areas, brood stocks, facilities to be used.	
1991	Brood stock development.	
1992	Begin supplementation and monitoring of treatment streams, and monitoring of control streams.	
1996	Small scale investigations into chinook salmon supplementation strategies and techniques: 1992-1994. Technical Report. Perry, C.A. and T.C. Bjornn.	
1997	First generation returns, a known brood stock for supplementation is established.	
1998	Five-year Report (1991-1996) in progress.	

8909801	Evaluate Salmon Supplementation in Idaho Rivers (ISS)	U.S. Fish and Wildlife Service - Idaho Fishery Resource Office
1991	Identified study areas, brood stocks, facilities to be used.	
1992	Begin supplementation and monitoring of treatment streams, and monitoring of control streams.	
1995	Annual Report for 1991-93 Pete King and Clear creeks. USFWS.	
1996	Small scale investigations into chinook salmon supplementation strategies and techniques: 1992-1994. Technical Reports. Perry, C.A. and T.C. Bjornn.	
1997	First generation returns, a known brood stock for supplementation is established.	
1997	Initiated radio telemetry study to monitor adult movement and identify spawning locations of adults released above weir.	
1998	Five-year Report (1992-1997) in progress.	

8909802	Evaluate Salmon Supplementation Studies in Idaho Rivers	Nez Perce Tribe
1991	Identified study areas, brood stocks, facilities to be used.	
1992	Begin supplementation and monitoring of treatment streams and monitoring of control streams.	
1993	Annual Report - Nez Perce Tribe	
1994	Annual Report - Nez Perce Tribe	
1996	Small scale investigation into chinook salmon supplementation strategies and techniques: 1992 -1994. Technical Reports. Peery, C.A. and T.C. Bjornn.	
1997	First generation returns, a known brood stock for supplementation is established.	
1998	Five-year Report (1992-1997) in progress.	

8909803	Evaluate Salmon Supplementation Studies in Idaho Rivers	Shoshone-Bannock Tribes
1991	Identified study areas, brood stocks, facilities to be used.	
1992	Begin supplementation and monitoring of treatment streams and monitoring of control streams.	
1996	Annual Report (1992-1995) Shoshone-Bannock Tribes	
1996	Small scale investigation into chinook salmon supplementation strategies and techniques: 1992 -1994. Technical Reports. Peery, C.A. and T.C. Bjornn.	
1997	First generation returns, a known brood stock for supplementation is established.	
1998	Five-year Report (1992-1997) in progress.	

9005500	Steelhead Supplementation Studies in Idaho Rivers	Idaho Department of Fish and Game
1992	I submitted a detailed experimental design to BPA for this project	
1993	We outplanted adult hatchery steelhead from Sawtooth Hatchery in Beaver and Frenchman creeks	
1993	SF Red River was stocked with 50,000 hatchery fingerlings.	
1993	Crews snorkeled 8 streams to obtain juvenile steelhead densities.	
1993	Crews PIT-tag 2,870 juvenile steelhead in 6 streams.	
1994	We outplanted adult hatchery steelhead from Sawtooth Hatchery in Beaver and Frenchman creeks.	
1994	SF Red River was stocked with 50,000 hatchery fingerlings.	
1994	Crews snorkeled 8 streams to obtain juvenile steelhead densities.	
1994	Crews PIT-tag 6,314 juvenile steelhead in 12 streams.	
1994	Crews collected scales from juvenile steelhead in 5 stream and adults from 3 streams	
1995	We outplanted hatchery adult steelhead from Sawtooth Hatchery in Beaver Creek	
1995	Stock 50,000 hatchery fingerlings in SF Red River	
1995	We installed a temporary weir in Fish Creek and counted the adult escapement.	
1995	Crews snorkeled 8 streams to obtain juvenile steelhead densities.	
1995	Crews PIT-tag 3,431 juvenile steelhead in 7 streams	
1995	Crews collected scales from juvenile steelhead in 4 streams and adults from 5 streams.	
1996	We outplanted hatchery adults from Sawtooth Hatchery in Beaver Creek	
1996	Stock 50,000 hatchery fingerlings in SF Red River	
1996	We stocked 5,000 hatchery smolts in Red River	
1996	We installed a temporary weir in Fish Creek and counted the adult escapement.	
1996	Crews PIT-tag 7,998 juvenile steelhead in 11 streams.	
1996	Crews snorkeled 12 streams to obtain juvenile steelhead densities.	
1996	Crews collected scales from juvenile steelhead in 2 streams and adults in 1 stream	
1997	We outplanted hatchery adults from Sawtooth Hatchery in Beaver and Frenchman creeks	
1997	We stocked 5,000 hatchery smolts in Red River	
1997	We installed a temporary weir in Fish Creek to count adult escapement	
1997	Crews snorkeled 13 streams to obtain juvenile steelhead densities.	
1997	Crews PIT-tag about 9,200 juvenile steelhead in 11 streams	
1997	We collected scales from juvenile steelhead in 4 streams and adults from 2 streams	
1997	We collected fin samples for future DNA analysis from juvenile steelhead in 4 streams and adults in 2 streams.	
1998	We outplanted hatchery adult steelhead from Sawtooth Hatchery in Beaver Creek	
1998	We stocked 5,000 hatchery smolts in Red River	
1998	We installed a temporary weir in Fish Creek to count adult escapement.	
1998	Crews snorkeled 10 stream to obtain juvenile steelhead densities	
1998	Crews PIT-tag about 6,700 juvenile steelhead in 11 streams	
1998	We collected scales from juvenile steelhead in 3 streams and adults in 2 streams	
1998	We collected fin samples for future DNA analysis from juvenile steelhead in 6 streams and adults in 2 streams.	
1998	We mounted and aged 432 adult steelhead scales and 2,766 juvenile steelhead scales that were collected from 1993 to 1997.	

9107300	Idaho Natural Production Monitoring and Evaluation	Idaho Department of Fish and Game
1984	The general parr monitoring database was started in 1984 and continues today. It represents the most comprehensive salmon and steelhead database in Idaho and is the only long-term database for steelhead.	

1985	Documented the relative success of in-stream structures versus off-channel habitat development to increase parr production.	
1988	Increased chinook and steelhead parr production by over 135,000 fish following habitat improvements.	
1988	Identified factors affecting survival of chinook and steelhead parr.	
1988	Estimated chinook egg-to-parr survival in the headwaters of the Salmon River and Crooked River.	
1988	Estimated chinook egg-to-parr survival of fish supplemented by different methods (e.g. adult outplants, fry releases, egg outplants).	
1988	Estimated survival impacts due to irrigation diversions.	
1989	Estimated seeding level for A-run and B-run steelhead in specific rearing areas.	
1992	Identified differences in peak arrival time to Lower Granite dam between hatchery and wild chinook.	
1993	Determined release strategies for hatchery chinook smolts and adults to increase survival and production.	
1994	Documented adult chinook and steelhead escapement to three pristine wilderness streams during 1994-1996.	
1997	Identified decreased survival associated with multiple collection and bypass.	
1997	Verified PATH chinook salmon smolt-to-adult recovery goals with Snake River basin smolts/female estimates.	
1998	Completed model for estimating smolt-to-adult return rate by migration route.	
9606700	Manchester Spring Chinook Broodstock Project	National Marine Fisheries Service
1996	Precocious age-2 males returned to ODFW	
1997	Age-3 males returned to ODFW	
1997	Age-3 males released in Idaho	
1998	Age 4 males and females returned to ODFW and IDFG	
9703800	Preserve Listed Salmonid Stocks Gametes	Nez Perce Tribe
1997	Cryopreserved 189 chinook salmon samples	
1998	Finalized and submitted 1997 annual report to BPA	
1998	Cryopreserved 296 chinook salmon samples	
1998	Conducted fertilization trials with cryopreserved semen versus fresh semen at Washington State University	
1998	Thawed cryopreserved semen and fertilized Grande Ronde basin chinook captive broodstock eggs	
1998	Cryopreserved 101 Grande Ronde Basin captive broodstock chinook salmon male gametes	
9700100	Captive Rearing Initiative for Salmon River Chinook Salmon	Idaho Department of Fish and Game
1995	Collection of brood year 1994 spring chinook salmon parr from the Lemhi River, East Fork Salmon River, and West Fork Yankee Fork Salmon River.	
1996	Collection of brood year 1995 spring chinook salmon parr from the Lemhi River.	
1996	Less than 6% male maturation in brood year 1994 stocks (age 2).	
1997	Less than 30% male maturation in brood year 1994 stocks (age 3).	
1997	Successful outplanting of up to four, brood year 1994, three-year-old male chinook salmon to source streams. Movement and behavior documented.	
1997	Milt from brood year 1994 East Fork Salmon River and West Fork Yankee Fork Salmon River male chinook salmon cryopreserved.	
1997	Less than 6% male maturation in brood year 1995 Lemhi River chinook salmon (age 2).	
1997	Collection of brood year 1996 spring chinook salmon parr from the Lemhi River and West Fork Yankee Fork Salmon River.	
1998	Age 4 maturation in East Fork Salmon River (59%), West Fork Yankee Fork Salmon River (93%), and Lemhi River (74%) brood year 1994 stocks.	
1998	Less than 26% male maturation in brood year 1995 Lemhi River stock (age 3).	
1998	Less than 5% male maturation in brood year 1996 stocks (age 2).	
1998	Successful outplanting of maturing, brood year 1994 (four-year-old) and brood year 1995 (three-year-old Lemhi River males) chinook salmon to source streams.	
1998	Documentation of 25, and 4 redds (constructed by captive program chinook) in the Lemhi River system and West Fork Yankee Fork Salmon River, respectively.	
1998	Milt from brood year 1994, 1995, and 1996 captive chinook cryopreserved.	
1998	Successful hatchery pilot investigation of gamete quality and survival to the eyed-egg stage for spawn products produced by Lemhi River (brood year 1994, 1995), East Fork Salmon River (brood year 1994), and West Fork Yankee Fork Salmon River (brood year	

1998	Collection of brood year 1997 spring chinook salmon parr from the Lemhi River and West Fork Yankee Fork Salmon River.	
9705700	Salmon River Production Program	Shoshone-Bannock Tribes
1995	Sidestream Incubation Pilot Study	
1996	Steelhead Sidestream Incubation	
1997	Steelhead and Chinook Sidestream Incubation	
1998	Steelhead and Chinook Sidestream Incubation	
9604300	Johnson Creek Artificial Propagation Enhancement Project	Nez Perce Tribe
1997	Development of the Johnson Creek Summer Chinook Salmon Supplementation Program	
1997	Collected baseline information on environmental conditions on Johnson Creek	
1998	Initiated preliminary design analysis	
1998	Collected baseline information on environmental conditions on Johnson Creek	
1998	Determined abundance and selected life history characteristics/patterns of juvenile summer chinook salmon.	
1998	Determined abundance and spawning distribution/success of upstream migrant adult summer chinook salmon.	
1998	Operation of the adult weir (July through September) resulted in the capture of 114 adult summer chinook. There were 54 adults utilized as broodstock.	
1998	Monitor and evaluate operation of adult collection and holding facility for adverse impacts to summer chinook salmon.	
1998	Prepared quarterly reports and presented results	
9102800	Monitoring Smolt Migrations of Wild Snake River Sp/Sum Chinook	National Marine Fisheries Service
1997	Documented migrational timings of individual and combined populations of wild Snake River sp/sum. chinook salmon smolts at dams.	
1997	Migrational timings of these wild fish populations at traps and dams were used for real-time management of the hydropower system operations and water budget usage.	
1997	Documented environmental conditions within some streams where PIT-tagged wild parr reside.	
9703000	Monitor Listed Stock Adult Chinook Salmon Escapement	Nez Perce Tribe
1997	Install, operate and maintain the Secesh River fish counting station on a daily basis to ensure safe and accurate operation of the facility.	
1997	Implement the monitoring and evaluation plan for the Secesh River fish counting station to ensure that adult salmon do not reject the structure and that fish passage is not impeded.	
1997	Determine the timing of adult spawner migration into the Secesh River.	
1997	Determine the adult salmon escapement into the Secesh River.	
1998	Install, operate and maintain fish counting stations on the Secesh River and Lake Creek on a daily basis to ensure safe and accurate operation of the facility.	
1998	Implement the monitoring and evaluation plan for the Secesh River and Lake Creek fish counting stations to ensure that adult salmon do not reject the structure and that fish passage is not impeded.	
1998	Yes - Fish passage did not appear to be impeded, nor was spawning displaced downstream.	
1998	Determine the adult salmon escapement into the Secesh River and Lake Creek.	
1998	Compare the fish counting station escapement number with intensive and index redd count technique numbers.	
1998	Investigate the use of underwater video in taking morphometric measurements of adult salmon migrating into the Secesh River and Lake Creek.	
1998	Determine if and estimate the number of hatchery strays.	
9902000	Analyze the Persistence and Spatial Dynamics of Snake River Chinook Salmon	U.S. Forest Service, Rocky Mountain Research Station
1995	Drainage-wide redd count. Begin aerial mapping of spawning patches.	
1996	Drainage-wide redd count. Aerial and ground mapping of spawning patches. Measures of patch characteristics.	
1997	Drainage-wide redd count. Continue aerial and ground mapping of spawning patches. Continue measures of patch characteristics.	
1998	Drainage-wide redd count. Continue aerial and ground mapping of spawning patches. Continue measures of patch characteristics.	
9107200	Redfish Lake Sockeye Salmon Captive Broodstock Program	Idaho Department of Fish and Game
1991	Development of first broodstock from the four anadromous adult returns (BY91 spawning).	

First cryopreservation of sockeye milt.
Excellent rearing survival of wild -captured outmigrants transferred to Eagle Hatchery.
Primary facility improvements made to accommodate program at Eagle Hatchery.

1992 Cryopreservation of milt from the single male anadromous adult return.
First collection of residual sockeye salmon.
Development of a limited residual broodstock (BY92 spawning)

1993 Development of broodstocks from the eight anadromous adult returns (BY93 spawning). Maturing outmigrants collected in 1991 incorporated in the spawning matrix.
Cryopreservation of milt from anadromous males and captive outmigrants.
First release of pre-spawn adults (20) in Redfish Lake in September.

1994 Development of BY94 broodstocks from the single female anadromous adult return and first generation male progeny from BY91.
Development of BY94 supplementation groups using captive outmigrants and first generation progeny from BY91.
First release of pre-smolts (~14,200) to Redfish Lake.
Second release of pre-spawn adults (65) in Redfish Lake in September.

1995 Development of limited broodstocks using wild - captured residual and captive outmigrants (BY95 spawning).
Approximately 85,000 pre-smolts released in Redfish Lake using several supplementation strategies.
Approximately 9,000 pre-smolts released in Pettit Lake.
Approximately 850 hatchery-produced outmigrants (from 1994 supplementation) successfully overwintered and outmigrated as smolts in 1995.
First program smolt release (~3,800) in Redfish Lake Creek.
IDFG re-opens Redfish Lake kokanee fishery to help manage kokanee competition.

1996 Development of BY96 broodstocks from the single female anadromous adult return and first generation male progeny from BY93.
Development of BY96 supplementation groups using first generation progeny from BY93.
First development of safety net broodstock using cryopreserved milt.
Approximately 2,000 pre-smolts released in Redfish Lake.
First plant of eyed-eggs (~105,000) in Redfish Lake.
Pre-spawn adults (120) released to Redfish Lake with subsequent identification of approximately 30 redds.
Approximately 14,900 hatchery-produced outmigrants (from 1995 Redfish and Pettit lake supplementation) successfully overwintered and outmigrated as smolts in 1996.
Approximately 11,500 smolts released in Redfish Lake Creek.

1997 Development of BY97 supplementation groups using first generation progeny from BY94.
Approximately 250,000 pre-smolts released in three lakes.
Pre-spawn adults released to Redfish (80), Alturas (20), and Pettit (20) lakes. Redds observed in Redfish and Pettit lakes.
Eyed-eggs planted in Redfish (85,000) and Alturas (20,000) lakes.
Approximately 400 hatchery-produced outmigrants (from 1996 supplementation) successfully overwintered and outmigrated as smolts in 1997.

1998 Development of BY98 supplementation groups using first generation progeny from BY96 (females) and BY94 males.
Development of BY98 safety net groups using first generation progeny from BY96 (females), the single 1998 anadromous male return, and cryopreserved milt.
Approximately 142,000 pre-smolts released in three lakes.
Approximately 82,000 smolts released in Redfish Lake Creek and the upper Salmon River.
Approximately 58,400 hatchery-produced outmigrants (from 1997 supplementation) successfully overwintered and outmigrated as smolts in 1997.

9204000	Redfish Lake Sockeye Salmon Captive Broodstock Rearing and Research	National Marine Fisheries Service

1996 Spawned 1993 brood at age-3, produced 390,000 eyed eggs for transfer and 40 adults for release in Redfish Lake.

1997 Spawned 1993 brood at age-4 and 1994 brood at age 3. Produced eggs and fry for transfer to Idaho and Oregon

9107100	Snake River Sockeye Salmon Habitat and Limnological Research	Shoshone-Bannock Tribes
1994	Fertilization experiment in limnocorral enclosures in Redfish Lake.	
1995	Test fertilization of Redfish Lake.	
1995	Reduce the number of non-endemic spawning kokanee in Fishhook Creek.	
1997	Fertilize lakes to increase sockeye carrying capacity and overwinter survival of released sockeye pre smolts in Redfish, Alturas, and Pettit lakes.	

9202603	Idaho Model Watershed Administration/Implementation Support	Idaho Soil Conservation Commission
1993	Stabilized 200 yards of streambank on East Fork of the Salmon River.	
1993	Improved 29 irrigation diversion structures on the Lemhi River.	
1994	experimental “fish flush” conducted by irrigators to allow chinook adults passage to spawning areas on Lemhi River.	
1994	Big Flat Ditch siphon completed to reconnect Carmen Creek to the mainstem Salmon River.	
1995	Riparian enhancement fence completed on 4.5 miles of streambank on two ranches in the Pahsimeroi and three ranches on the Lemhi River.	
1995	Point of diversion transferred from the Pahsimeroi River to the Salmon River.	
1995	Two diversions eliminated on Lemhi River with a combined net savings of 1,600 acre feet of water.	
1995	Seven irrigation diversions consolidated into three irrigation diversions on Lemhi River.	
1996	Three ranches near Leadore construct fencing and implement grazing/pasture management systems along 5.75 miles of critical stream habitat along Lemhi River.	
1996	Two canals eliminated from the Salmon River through consolidation into Challis Irrigation Canal.	
1996	Constructed riparian enhancement fences on two ranches in East Fork along 1.75 miles of river.	
1996	Diversions EF-7 and EF-8 consolidated on East Fork.	
1997	Completed L-3A diversion structure and bypass system on Lemhi River.	
1997	Reset pipe on old L-5 diversion to provide off-channel rearing habitat on Lemhi River.	
1997	Constructed 0.75 miles of fence and developed a grazing system for a ranch along the Lemhi River.	
1997	Constructed 15 miles of fence on 8.5 miles of the upper Lemhi River along critical chinook spawning and rearing habitat.	
1997	Streambank stabilization and off-channel rearing site along lower Lemhi River.	
1997	Construction of 0.85 miles of fence on the lower Lemhi stream reach.	
1997	Construction of 0.75 miles of fence along Pattee Creek, tributary to Lemhi River.	
1997	Riparian pasture management fencing was constructed on three ranches along 3 miles of the Pahsimeroi River.	
1997	Phase I of a riparian management project on the East Fork installed a series of in-stream bank stabilization structures.	
1998	At L-8a diversion, a headgate, wasteway, and vortex weir were installed to facilitate fish passage and eliminate gravel push up dams on Lemhi River.	
1998	Riparian fence along 0.90 miles of the upper Lemhi River and Texas Creek, tributary to the Lemhi.	
1998	Riparian fence along 1.2 miles of Hayden Creek, tributary to the Lemhi River.	
1998	Riparian fence along 1.0 mile of Eighteen mile Creek a headwater tributary of the Lemhi River.	
1998	Riparian fence and grazing management system along 1.0 mile of Pahsimeroi River/Patterson Creek.	
1998	Riparian fence have been started with 3 landowners along 2.8 miles of the East Fork.	

9401700	Idaho Model Watershed Habitat Projects	Lemhi and Custer Soil and Water Conservation Districts
1993	Stabilized 200 yards of streambank on East Fork of the Salmon River.	
1993	Improved 29 irrigation diversion structures on the Lemhi River.	
1994	experimental “fish flush” conducted by irrigators to allow chinook adults passage to spawning areas on Lemhi River.	
1994	Big Flat Ditch siphon completed to reconnect Carmen Creek to the mainstem Salmon River.	
1995	Riparian enhancement fence completed on 4.5 miles of streambank on two ranches in the Pahsimeroi and three ranches on the Lemhi River.	
1995	Point of diversion transferred from the Pahsimeroi River to the Salmon River.	
1995	Two diversions eliminated on Lemhi River with a combined net savings of 1,600 acre feet of water.	
1995	Seven irrigation diversions consolidated into three irrigation diversions on Lemhi River.	

1996 Three ranches near Leadore construct fencing and implement grazing/pasture management systems along 5.75 miles of critical stream habitat along Lemhi.
1996 Two canals eliminated from the Salmon River through consolidation into Challis Irrigation Canal.
1996 Two ranches on East Fork constructed riparian enhancement fences along 1.75 miles of river.
1996 Diversions EF-7 and EF-8 consolidated on East Fork.
1997 Completed L-3A diversion structure and bypass system.
1997 Reset pipe on old L-5 diversion to provide off-channel rearing habitat.
1997 Constructed 0.75 miles of fence and developed a grazing system for a ranch along the Lemhi River.
1997 Constructed 15 miles of fence on 8.5 miles of the upper Lemhi River along critical chinook spawning and rearing habitat.
1997 Streambank stabilization and off-channel rearing site along lower Lemhi River.
1997 Construction of 0.85 miles of fence on the lower Lemhi stream reach.
1997 Construction of 0.75 miles of fence along Pattee Creek.
1997 Riparian pasture management fencing was constructed on three ranches along 3 miles of the Pahsimeroi River.
1997 Phase I of a riparian management project on the East Fork installed a series of in-stream bank stabilization structures.
1998 At L-8a diversion a headgate, wasteway, and vortex weir were installed to facilitate fish passage and eliminate gravel push up dam.
1998 Riparian fence along 0.90 miles of the upper Lemhi River and Texas Creek.
1998 Riparian fence along 1.2 miles of Hayden Creek.
1998 Riparian fence along 1.0 mile of Eighteenmile Creek a headwater tributary of the Lemhi River.
1998 Riparian fence and grazing management system along 1.0 mile of Pahsimeroi River/Patterson Creek.
1998 Riparian fence have been started with 3 landowners along 2.8 miles of the East Fork.

9306200	Salmon River Anadromous Fish Passage Enhancement	Lemhi and Custer Soil and Water Conservation Districts

1993 Stabilized 200 yards of streambank on East Fork of the Salmon River.
1993 Improved 29 irrigation diversion structures on the Lemhi River.
1994 experimental “fish flush” conducted by irrigators to allow chinook adults passage to spawning areas on Lemhi River.
1994 Big Flat Ditch siphon completed to reconnect Carmen Creek to the mainstem Salmon River.
1995 Riparian enhancement fence completed on 4.5 miles of streambank on two ranches in the Pahsimeroi and three ranches on the Lemhi River.
1995 Point of diversion transferred from the Pahsimeroi River to the Salmon River.
1995 Two diversions eliminated on Lemhi River with a combined net savings of 1,600 acre feet of water.
1995 Seven irrigation diversions consolidated into three irrigation diversions on Lemhi River.
1996 Three ranches near Leadore construct fencing and implement grazing/pasture management systems along 5.75 miles of critical stream habitat along Lemhi River.
1996 Two canals eliminated from the Salmon River through consolidation into Challis Irrigation Canal.
1996 Constructed riparian enhancement fences on two ranches in East Fork along 1.75 miles of river.
1996 Diversions EF-7 and EF-8 consolidated on East Fork.
1997 Completed L-3A diversion structure and bypass system on Lemhi River.
1997 Reset pipe on old L-5 diversion to provide off-channel rearing habitat on Lemhi River.
1997 Constructed 0.75 miles of fence and developed a grazing system for a ranch along the Lemhi River.
1997 Constructed 15 miles of fence on 8.5 miles of the upper Lemhi River along critical chinook spawning and rearing habitat.
1997 Streambank stabilization and off-channel rearing site along lower Lemhi River.
1997 Construction of 0.85 miles of fence on the lower Lemhi stream reach.
1997 Construction of 0.75 miles of fence along Pattee Creek, tributary to Lemhi River.
1997 Riparian pasture management fencing was constructed on three ranches along 3 miles of the Pahsimeroi River.
1997 Phase I of a riparian management project on the East Fork installed a series of in-stream bank stabilization structures.
1998 At L-8a diversion, a headgate, wasteway, and vortex weir were installed to facilitate fish passage and eliminate gravel push up dams on Lemhi River.
1998 Riparian fence along 0.90 miles of the upper Lemhi River and Texas Creek, tributary to the Lemhi.
1998 Riparian fence along 1.2 miles of Hayden Creek, tributary to the Lemhi River.

1998	Riparian fence along 1.0 mile of Eighteenmile Creek a headwater tributary of the Lemhi River.	
1998	Riparian fence and grazing management system along 1.0 mile of Pahsimeroi River/Patterson Creek.	
1998	Riparian fence have been started with 3 landowners along 2.8 miles of the East Fork.	
9401500	Idaho Fish Screen Improvement - O&M	Idaho Department of Fish and Game
1993	Built Anadromous Fish Screen Shop	
1994	Equipment purchased and screen construction to NMFS criteria.	
1997	Constructed fish screens on consolidated canals, three fish friendly diversions, 20 pump intake screens, 2 infiltration screens and 17 headgates.	
1998	Constructed fish screens, 4 fish friendly diversions, safety fences, canal eliminations and two stream reconnects, 20 pump intake screens, and 12 headgates.	
9405000	Salmon River Habitat Enhancement M&E	Shoshone-Bannock Tribes
1989	Reclamation of 2.5 km of floodplain in Bear Valley Creek eliminated a substantial source of fine sediment into the remaining 50 km of stream and the Middle Fork Salmon River.	
1988	Successful interconnection of four series of remnant dredge ponds with the mainstem Yankee Fork Salmon River, creating over 1.5 ha of additional rearing habitat for anadromous salmonids.	
1991	Successful modification of a debris jam and removal of an abandoned dam has allowed access to an additional 3.2 km of spawning habitat and 7.7 km of rearing habitat for anadromous salmonids and bull trout.	
1992	Fencing constructed on Herd Creek to discourage livestock use of streambank and riparian areas, thus improving streambank stability and reducing sediment input into the stream.	
1994	Vertical banks in a cutoff channel in Big Boulder Creek were sloped, the stream was diverted away from high cutbanks, returned to a more natural meander pattern within 0.5 km of affected floodplain, eliminating the cutoff channel of BBC as a sediment sou.	
9901900	Restore the Salmon River, in the Challis, ID area, to a Healthy Condition	Custer County Watershed Group
1998	Initiate Project after budget confirmation fall 98	
9600700	Irrigation Diversion Consolidations & Water Conservation; Upper Salmon R	Lemhi County Soil and Water Conservation District
	Consolidated four (4) gravity diversions into one (1). Eliminated three (3) diversions from the Salmon River. Converted from flood to sprinkler irrigation systems.	
	Consolidated three (3) gravity and one (1) pump diversion into one (1). Eliminated two (2) gravity and one (1) pump diversions.	
	Converted from flood to sprinkler irrigation systems.	
	Construct new fish screen on consolidated diversion (S-28) (Construct Spring 99)	
	Construct new fish screen on consolidated diversion (S-32)(Construct Fall 99).	

Grande Ronde Subbasin

20556	Grande Ronde Endemic Spring Chinook Supplementation Program Umbrella	
1995	Collected spring chinook parr from Grande Ronde for rearing to captive broodstock	
1996	Developed comprehensive captive broodstock management plan	
1996	Prepared application and received NMFS ESA Section 10 permit 1011	
1996	Collected spring chinook parr from Grande Ronde for rearing to captive broodstock	
1997	Captive brood building constructed at Bonneville Hatchery	
1997	Modified ESA Permit 1011 to include conventional smolt production	
1997	Operated 3 weirs in Grande Ronde to estimate population size and collect endemic spring chinook adults for conventional broodstock	
1997	Collected spring chinook parr from Grande Ronde for rearing to captive broodstock	
1998	Developed comprehensive management program integrating captive and conventional brood production.	
1998	Operated 3 adult weirs in the Grande Ronde tributaries to collect endemic spring chinook adults for conventional broodstock	
1998	Prepared application and received ESA Permit	

1998	Collected spring chinook parr from Grande Ronde for rearing to captive broodstock	
1998	Preserved gametes and spawned fish at Bonneville and Manchester.	
9800702	Grande Ronde Supplementation - O&M/M&E - Nez Perce Tribe Lostine	Nez Perce Tribe
1997	Development of the Grande Ronde Basin Endemic Spring Chinook Salmon Supplementation Program (GRESP).	
1997	Preliminary planning and design and environmental assessment (NEPA) documents were completed for the adult trapping/holding and juvenile acclimation/release facilities.	
1997	Land acquisition agreement for the adult trapping facility was procured through the BPA Lands Division	
1997	Operation of the adult trapping facility (July-October) resulted in the capture of a total of 27 adult spring chinook. Seven of these were collected as broodstock and resulted in approximately 12,000 smolts for release in 1999.	
1997	Monitor and evaluate the adult weir and trap operation.	
1997	Continue collection of baseline information on environmental conditions in the Lostine River.	
1998	Completion of final design and the Environmental Assessment for the adult trapping and juvenile acclimation facilities.	
1998	Project was evaluated by an Independent Science Review through the Northwest Power Planning Council's 3-Step Review Process. The NPPC approved funding for the construction of the facilities in June.	
1998	Land acquisition agreement for the Lostine acclimation facility site was procured through the BPA Lands Division.	
1998	A comprehensive management plan was developed by the NPT and ODFW for the Lostine River, which integrated conventional and captive broodstock production.	
1998	ESA Section 10 Permit Applications were cooperatively developed by ODFW and the NPT and submitted to NMFS for project authorization.	
1998	Operation of the adult weir (June-October) resulted in the capture of 23 adult spring chinook. None were utilized as broodstock.	
1998	Recruited project leader and biologist for M&E component of the program.	
1998	Monitored and evaluated the adult weir and trap operation.	
1998	Continue collection of baseline information on environmental conditions in the Lostine River.	
1998	Collected and analyzed baseline information on population abundance and life history characteristics.	
1998	PIT tagged 5,000 BY 1997 chinook parr at Lookingglass Hatchery for release in 1999.	
1998	Prepared quarterly reports and presented results.	
9800703	Facility O&M and Program M&E for Grande Ronde Spring Chinook Salmon	Confederated Tribes of the Umatilla Indian Reservation
1997	Preliminary NEPA evaluation completed.	
1997	Completed designs for adult collection and juvenile acclimation facilities at all three stream locations	
1997	Installation/operation of adult collection facilities	
1998	Final NEPA evaluation completed.	
1998	Completed ESA Section 10 permit applications with comanagers.	
1998	Completed comprehensive management plan for the Grande Ronde River basin with comanagers integrating conventional and captive brood.	
1998	Installation/operation of adult collection facilities	
1998	Collected 1997 brood year juveniles from Catherine Creek, Lostine and Upper Grande Ronde Rivers	
1998	Preserved gametes and spawned fish at Bonneville and Manchester.	
9801006	Captive Broodstock Artificial Propagation	Nez Perce Tribe
1995	Cooperatively developed the Section 10 Permit for the collection of chinook parr from the Lostine, Catherine Creek, and upper Grande Ronde Rivers	
1996	Participated in CONSPOT and captive broodstock management plan meetings	
1998	Acquired funding for full NPT participation in the captive brood program	
1998	Collected 501 wild parr from the Lostine River	
1998	Collected biological data from juvenile captives at LGH	
1998	Implanted VI tags and collected biological data from maturing captives at BOH and MML	
1998	Spawned 317 captive brood fish (122 females)	
1998	Aquired baseline data on remnant population of wild chinook in the Lostine River	

1998	Summarizing and evaluating data collected from captive and wild chinook populations	
8805301	Northeast Oregon Hatchery Master Plan	Nez Perce Tribe
1997	Reinitiated project following seven year hiatus. Hired project leader and assistant project leader.	
1997	Participated in planning, design, development, and NEPA analysis of Lostine River adult trapping and acclimation facilities.	
1997	Initiated development of Imnaha River spring chinook fisheries management plan with Dr. Phillip R. Mundy.	
1998	Cooperatively developed management plan with ODFW and CTUIR for Imnaha and Lostine River spring chinook programs. Development of the sliding scale tool for broodstock allocation.	
1998	Completed well testing at proposed incubation and rearing facility site on the Imnaha River.	
1998	Completed cultural resource surveys of proposed facility sites.	
1998	Hired lead writer for master planning.	
1998	Finalized feasibility study on reintroduction of coho and sockeye salmon in the Grande Ronde River (Cramer and Witty 1998).	
1998	Completed Imnaha River spring chinook fisheries management plan (Mundy and Witty 1998).	
1998	Initiated Independent Review of Lookingglass Hatchery to meet needs of currently permitted and programmed spring chinook production.	
20512	Grand Ronde River Basin Umbrella	Oregon Department of Fish and Wildlife
1986	Restored recreational fishery for summer steelhead.	
1993	Identified potential mitigation opportunities by priority (OTAP Project).	
1995	Initiated spring chinook captive broodstock program.	
1996	Completed genetics characterization of chinook salmon populations.	
1997	Initiated conventional supplementation program in Catherine Creek, upper Grande Ronde and Lostine Rivers.	
1997	Completed ecosystem diagnosis and treatment as a watershed assessment tool.	
1997	Created series of databases and GOA layers to assist in the evaluation of potential wildlife mitigation projects (GAP analysis Project).	
1998	Identified life history patterns and critical habitat for spring chinook salmon in the upper Grande Ronde subbasin.	
1998	Collected embryos from the first ripe 1994 captive broodstock females.	
1998	Resolution of co-management of Grande Ronde stocks using hatchery supplementation programs.	
1998	Completed screening most diversions in the Grande Ronde subbasin.	
1998	Continued implementation of habitat enhancement.	
1998	Elimination of non-endemic broodstock at Lookingglass Hatchery.	
1998	Identified two potential mitigation projects in the two subbasins that would meet wildlife mitigation objectives.	
8805305	Northeast Oregon Hatcheries Planning and Implementation - ODFW	Oregon Department of Fish and Wildlife
1997	Comanagers installed temporary adult collection facilities in upper Grande Ronde River, Catherine Creek, and Lostine River and began collecting adult chinook. ODFW spawned and reared progeny of adults collected from Lostine River.	
1998	Completed long-term management plan for Grande Ronde endemic spring chinook program and applied for modification of ESA Section 10 Permit No. 1011. Plan was developed cooperatively with NPT, CTUIR, and USFWS.	
1998	Completed designs for new adult collection and juvenile acclimation facilities in upper Grande Ronde River, Catherine Creek, and Lostine River. Received approval to begin construction, secured landowner agreements, and will begin construction in winter.	
1998	Comanagers operated temporary adult collection facilities in upper Grande Ronde River, Catherine Creek, and Lostine River.	
1998	Completed a long-term management plan for research and enhancement of Imnaha River chinook and applied for new ESA Section 10 Permit. The plan was developed cooperatively with NPT and USFWS.	
1998	Reviewed drafts of master plan documents prepared by or for NPT and provided comments to NPT. Wrote a captive broodstock alternative and submitted it to NPT for inclusion in Imnaha master plan.	
9801001	Grande Ronde Basin Spring Chinook Captive Broodstock Program	Oregon Department of Fish and Wildlife
1995	Collected 1994 brood juveniles from Catherine Creek, Grande Ronde and Lostine rivers.	

1996	Completed long-term management plan for captive broodstock program and obtained an ESA permit.	
1996	Collected 1995 brood juveniles from Catherine Creek and the Lostine River.	
1996	Cryopreserved semen from mature 1994 brood males.	
1997	Completed designs for new facilities for captive brood at Bonneville Fish Hatchery and Manchester Marine Lab. Completed NPPC review process and received approval for funding and construction. Began construction.	
1997	Transferred 1995 brood juveniles and cryopreserved semen from mature 1994 and 1995 brood males.	
1997	Collected 1996 brood juveniles from Catherine Creek, the Grande Ronde and Lostine rivers.	
1997	Began construction of Bonneville and Manchester Captive Broodstock facilities.	
1998	Collected 1997 brood juveniles from Catherine Creek, the Grande Ronde and Lostine rivers. Transferred 1996 brood to Bonneville and Manchester Hatcheries.	
1998	Sorted mature females and males at Bonneville and Manchester Hatcheries, and spawned 119, 1994 and one, 1995 brood females. Transferred embryos to Irrigon Hatchery for incubation.	
1998	Completed construction of Bonneville and Manchester Captive Broodstock facilities.	
9202604	Life History of Spring Chinook Salmon and Summer Steelhead	Oregon Department of Fish and Wildlife
1994	Deployed rotary screw traps at sites in the Grande Ronde River below upper rearing areas and below Grande Ronde valley.	
	Pit tagged 1,500 juvenile salmon and obtained recapture data from mainstem dams	
	Completed annual progress report.	
	Presentation to Grande Ronde Model Watershed Board of Directors.	
1995	Maintained Grande Ronde traps and deployed screw trap in Catherine Creek.	
	Pit tagged 1,500 juvenile salmon in both Catherine Creek and the upper Grande Ronde River and obtained recapture data from mainstem dams	
	Determined nighttime snorkeling to be the most effective method for locating juvenile salmon in winter.	
	Completed annual progress report.	
	Presentation at BPA review.	
1996	Maintained Grande Ronde River and Catherine Creek traps.	
	Pit tagged 1,500 juvenile salmon in both Catherine Creek and the upper Grande Ronde River and obtained recapture data from mainstem dams	
	Conducted summer and winter habitat surveys for juvenile chinook salmon.	
	Completed annual progress report.	
	Presentation to Northeast Oregon regional managers at ODFW Research Review.	
	Presentation at Oregon AFS.	
1997	Establish a field office for Wallowa River life history study.	
	Maintained Grande Ronde River and Catherine Creek traps. Deployed two traps in the Wallow River and one in the Lostine River.	
	Pit tagged 1,500 juvenile salmon in Catherine Creek, the upper Grande Ronde River, and the Lostine and obtained recapture data from mainstem dams.	
	Conducted summer and winter habitat surveys for juvenile chinook salmon.	
	Completed annual progress report.	
	Presentation at CBFWA Fish and Wildlife Program review.	
8402500	Protect and Enhance Anadromous Fish Habitat in Grande Ronde Basin Streams	Oregon Department of Fish and Wildlife
1998	Constructed 101 miles of riparian livestock exclosure fencing protecting 59.6 miles of stream and 1,394 acres of riparian habitat. Planted 76,195 riparian trees or shrubs, and installed 2,527 instream structures.	
9202601	Grande Ronde Model Watershed Program	Grande Ronde Model Watershed Program
1994	Stream & Riparian Conditions in the Grande Ronde Basin	
1994	Grande Ronde Model Watershed Program Operations-Action Plan	
1997	Grande Ronde Basin Water Quality Monitoring	
1997	Application of Ecosystem Diagnosis & Treatment Method to the Grande Ronde Model Watershed Project	
1994	244 miles of fencing (riparian & cross fencing)	
1994	182 miles of road closures/obliteration	

1994	107 miles of road improvements for sediment reduction	
1994	107 miles of stream treated with instream work (includes 398 structures)	
1994	142 off-stream livestock water developments	
1994	28 fish passage improvement projects	
1994	13 irrigation diversion improvement projects	
9608300	CTUIR Grande Ronde Basin Watershed Restoration	Confederated Tribes of the Umatilla Indian Reservation
1998	Completed Phase I of McCoy Meadows Restoration Project - reintroduced McCoy Creek to historic meander channels, implemented bioengineering, riparian tree/shrub planting (5,500 + plants installed), installed/relocated floodplain livestock exclosure	
1998	McIntyre Creek Road Relocation/Restoration Project	
1999	McCoy Meadows Restoration Project	
1999	Meadow Creek Restoration	
1999	Mainstem Grande Ronde Habitat Enhancement Project Implementation	
9403900	Wallowa Basin Project Planner	Nez Perce Tribe
1994	Bear Creek Action Plan.	
1995	Lostine River Habitat Assessment.	
1995	Combined three irrigation diversion structures on the Wallowa River into one structure with built in fish passage. This eliminated three annual pushup dams.	
1996	Converted annual push-up irrigation diversion structure into a permanent structure with built-in fish passage on the lower Lostine River.	
1997	Converted three annual push-up irrigation diversion structures into permanent structures with built-in fish passage on the lower Lostine River.	
1997	Constructed a low flow channel in the lower three miles of Bear Creek to facilitate late season passage of spring chinook to the spawning grounds.	
1994	Seven stream gages were installed at irrigation diversion structures in Bear Creek.	
1995	Twenty-nine stream gages installed at irrigation diversion structures in the Lostine and Wallowa rivers. Five additional gages were installed on the mainstems of Bear Creek and the Wallowa and Lostine rivers and two abandoned USGS gages were reinstalled.	
1996	Completed the Eco-System Diagnosis and Treatment project for Wallowa County.	
1997	Completed the Instream Flow Incremental Methodology study on the Lostine River.	
1998	Revised the hatchery/natural production computer model to include a sliding scale involving Oregon's Wild Fish Policy as per the dispute resolution settlement stemming from the 1993 spring chinook run in the Imnaha River.	
1995	Forty-six habitat projects approved in Wallowa County through the Grande Ronde Model Watershed Program in 1994-1995	
1996	Nineteen habitat projects approved in Wallowa County through the Grande Ronde Model Watershed Program.	
1997	Eleven habitat projects approved in Wallowa County through the Grande Ronde Model Watershed Program.	
1998	Ten habitat projects approved in Wallowa County through the Grande Ronde Model Watershed Program.	
9702500	Implement the Wallowa County/Nez Perce Tribe Salmon Habitat Recovery Plan	Nez Perce Tribe
1997	Seeded major slumps in the north part of Wallowa County following the January 1,1997 rain on snow event.	
1997	Beak Consultants contract to develop a bull trout position paper for Wallowa County in reference to the proposed listing and for a possible countywide Habitat Conservation Plan.	
1998	Finalized the Lostine IFIM study and report.	
1998	Relocated 0.36 miles of road out of the riparian zone in the Lightning Creek watershed, a tributary to the Imnaha River.	
1998	Streambank protection and habitat improvement project on the lower Imnaha River.	
20130	Northeast Oregon Mitigation Trust Fund	Nez Perce Tribe
1997	All new aerial photography of the project lands and surrounding area	
1997	Rebuilt access roads into the project area after major winter flooding	
1998	Initiated vegetation cover mapping project. Scanning area 7.5 minute orthophotoquads. Developing GIS Database.	

1998	Repaired and upgraded staff facilities in Tamarack Ck.: rebuilt electric generator power system, upgraded water system, major repairs on buildings, road maintenance.	
1998	Repaired 1 mile of existing fence in area of heavy trespass grazing. Basin Creek	
1998	Established fire protection subcontract with Oregon State Department of Forestry, initial attack.	
1998	Repaired staff facilities in Basin Creek.	
1998	Bought additional 158 acres adjacent to existing property.	
1998	Manual control of weeds along 6 miles of access road.	
9608000	Northeast Oregon Wildlife Mitigation Project	Nez Perce Tribe
1997	All new aerial photography of the project lands and surrounding area	
1997	Rebuilt access roads into the project area after major winter flooding	
1998	Initiated vegetation cover mapping project. Scanning area 7.5 minute orthophotoquads. Developing GIS Database.	
1998	Repaired and upgraded staff facilities in Tamarack Ck.: rebuilt electric generator power system, upgraded water system, major repairs on buildings, road maintenance.	
1998	Repaired 1 mile of existing fence in area of heavy trespass grazing. Basin Creek	
1998	Established fire protection subcontract with Oregon State Department of Forestry, initial attack.	
1998	Repaired staff facilities in Basin Creek.	
1998	Bought additional 158 acres adjacent to existing property.	
1998	Manual control of weeds along 6 miles of access road.	
20112	Securing Wildlife Mitigation Sites - Oregon, Wenaha WMA Additions	Oregon Department of Fish and Wildlife
1993	Created a list of potential wildlife mitigation projects throughout Oregon	
1997	Compiled more comprehensive prioritized list of mitigation sites; identified Wenaha WMA area as priority area	
1998	FY99 proposal for $100,000 to acquire or ease lands adjacent to the Wenaha WMA area was approved and recommended	
1998	Began landowner negotiations for land acquisition and/or conservation easement at Wenaha WMA	
1998	Developed partnerships with BLM, Clearwater Land Exchange, Trust for Public Lands, and The Nature Conservancy to help facilitate project objectives	
20114	Securing Wildlife Mitigation Sites - Oregon, Ladd Marsh WMA Additions	Oregon Department of Fish and Wildlife
1993	Created a list of potential wildlife mitigation projects throughout Oregon	
1996	Developed partnerships with The Nature Conservancy (TNC) and Ducks Unlimited (DU) to facilitate project objectives	
1997	Compiled more comprehensive prioritized list of mitigation sites; identified Ladd Marsh as priority area	
1997	TNC began landowner negotiations for land acquisitions	
1998	Title to 308-acre property secured by TNC	
1998	FY99 proposal for $8,000 to enhance 308-acre property was approved and recommended	
1998	DU prepared proposal for the Ladd Creek/Tule Lake Restoration Project	
1998	Title to 160-acre property secured by TNC	
1998	Enrollment of the 308-acre and 160-acre properties into the Federal Wetland Reserve Program	
20133	Irrigation as a Management Tool for Stream Temperature	Oregon State University
1998	Understood groudnwater/temp. relationship on Silvies River	
20129	Dworshak Mitigation Cultural Resource Survey Project	Nez Perce Tribe
1998	Bought 760 acres of diverse canyon lands.	
92-84	The Oregon Trust Agreement Planning Project	
1992	Initiated to identify potential mitigation sites through Oregon and to estimate costs for fully mitigation Oregon wildlife losses.	
1998	Completed project identified 287 potential wildlife mitigation sites throughout Oregon. Estimated costs for full mitigation averaged $250 million.	
95-66	Assessing Oregon Trust Agreement Planning Project Using Gap Analysis: Potential mitigation impacts for the impacts to Oregon wildlife resources associated with relevant mainstem Columbia River and Willamette River hydroelectric projects	
1996	Project initiated to re-evaluate and prioritize potential mitigation sites throughout Oregon.	

1998	Draft results provided prioritized list of mitigation sites.

9705900	Securing Wildlife Mitigation Sites – Oregon
1998	The Oregon Wildlife Coalition developed and submitted a programmatic project proposal for FY1999 funds. This proposal explained intent for mitigation planning, coordination, and implementation by Oregon wildlife managers within Oregon and identified priority projects for FY1999 with specific budgets to help meet wildlife mitigation objectives.
1998	Project was recommended by the NPPC for $4 million.
1998	Efforts to implement individual mitigation projects occurred.

20114	Securing Wildlife Mitigation Sites – Oregon, Ladd Marsh WMA Additions
1997	TNC began landowner negotiations for land acquisitions
1998	Title to 308-acre property secured by TNC
1998	FY 1999 proposal for $8,000 to enhance 308-acre property was approved and recommended
1998	Ducks Unlimited prepared proposal for the Ladd Creek/Tule Lake restoration project
1998	Title to 160-acre property secured by TNC
1998	Enrollment of the 308-acrea and 160-acre properties into the Federal Wetlands Reserve Program

20112	Securing Wildlife Mitigation Sites – Oregon, Wenaha WMA Additions
1998	FY 1999 proposal for $100,000 to acquire or ease lands adjacent to the WMA was approved and recommended
1998	Landowner negotiations began
1998	Formed partnerships with BLM, TNC, Clearwater Land Exchange, Trust for Public Land to help facilitate project objectives

Malheur Subbasin

20136	Burns Paiute Mitigation Coordinator	Burns Paiute Tribe
	Stinkingwater salmonid project	

20137	Acquisition of Malheur Wildlife Mitigation Site	Burns Paiute Tribe
	BPA and Trust for Public Lands have initiated negotiations with landowner.	

9701900	Evaluate the Life History of Native Salmonids in the Malheur Basin	Burns Paiute Tribe
1997	17 miles of stream survey Summit Creek.	
1997	Fish Survey's conducted on Wolf Creek, East Fork Wolf Creek.	
1998	Spawning surveys conducted on West Fork Big Meadow Creek, Lake Creek.	
1998	Fish Survey's conducted on Crooked Creek and McKoy Creek; bull trout found on Crooked Creek (bull trout are considered "not present" in this drainage).	
1998	30 miles of stream survey on Wolf Creek and East Fork Creek	
1998	Thermograph data (FY97 and 98)	

9701901	North Fork Malheur River Bull Trout and Redband Life History Study	Burns Paiute Tribe
1998	Identified bull trout entrainment over Beulah Reservoir	
1998	Identified a larger distribution range of spawning bull trout throughout the North Fork Malheur River tributaries	
1998	Documented 1 year of bull trout seasonal migration from Beulah Reservoir to the headwater streams	
1998	Monitored use of Beulah Reservoir prior to migration	
1998	Gathered genetic samples of radio tagged bull trout	
1998	Spawning surveys on all North Fork tributaries	
1998	Documented entire seasonal migration patterns of all radio tagged bull trout	
1998	Gathered infrared thermal imaging data for the North Fork River	

Upper Snake Subbasin

9903200	Consumptive Sturgeon Fishery-Hells Canyon and Oxbow Reservoirs	Nez Perce Tribe
1999	Development of white sturgeon management and augmentation plans for Hells Canyon and Oxbow reservoirs	
1999	Identification of source(s) for the white sturgeon needed to meet stocking objectives	

1999	Begin pilot white sturgeon augmentation to evaluate fishery potentials in Hells Canyon and Oxbow reservoirs	
9201000	Habitat Restoration/Enhancement Fort Hall Reservation	Shoshone-Bannock Tribes
1993	3,850 m jack and rail exclosure fence	
1993	7,124 willow shoots planted	
1993	760 m evergreen revetments	
1993	Numerous bank slopings and structures	
1993	Monitoring and evaluation of biotic and abiotic variables	
1994	6,000 m jack and rail exclosure fence	
1994	9,618 willow shoots, 130 cattails planted	
1994	300 m evergreen revetments	
1995	1,200 m jack and rail exclosure fence	
1995	2,105 willow pole cuttings, 193 cattails, 95 wattles planted	
1995	371 m evergreen revetments	
1995	Numerous bank slopings and structures	
1995	Monitoring and evaluation of biotic and abiotic variables	
1996	1,845 willow pole cuttings, 30 cattails planted	
1996	660 m evergreen revetments	
1996	Repair of numerous bank slopings and structures	
1996	Monitoring and evaluation of biotic and abiotic variables	
1997	1,745 willow pole cuttings planted	
1997	297 m evergreen revetments	
1997	Repair and construction of bank slopings and structures	
1997	Monitoring and evaluation of biotic and abiotic variables	
1998	1,500 m jack and rail exclosure fence	
1998	935 willow pole cuttings planted	
1998	1,230 m evergreen revetments	
1998	Repair of bank slopings and structures	
1998	Monitoring and evaluation of biotic and abiotic variables	
9500600	Shoshone-Bannock/Shoshone Paiute Joint Culture Facility	Shoshone-Bannock Tribes
1992	Feasibility study report, joint culture facilities for the resident fish substitution program on the Snake River above Hells Canyon in Idaho, CH2M Hill, Boise, ID	
1996	The Shoshone-Bannock and Shoshone-Paiute Tribes master plan for the Fort Hall resident fish hatchery, Montgomery Watson, 671 Riverpark Lane, Suite 200, Boise, ID	
1997	Emerson, S. and L. Boreson, PI J.R. Galm. 1997. Cultural resources survey of three proposed fish hatcheries in southeastern Idaho, Bingham and Power Counties #534, Archaeological and Historical, Eastern Washington University.	
1998	Upper Snake River Fish Culture Facility, Environmental Assessment, DOE/EA-1213, Bonneville Power Administration, PO Box 3621, Portland, OR 97208	
1998	Purchase of property and transfer in trust to the Shoshone-Bannock/Shoshone-Paiute Tribes	
9505700	Southern Idaho Wildlife Mitigation	Idaho Department of Fish and Game
	Protected and/or enhanced 2,013 HU (on approx. 11,362 acres)	
	Protected and/or enhanced 6,051 HU (on 5,008 acres)	
	Maintained above 2,013 HU	
	6,920 HU (on 2,600 acres) is to be permanently protected by March 1999	
	Maintained above 8,064 HU	
9106700	Idaho Water Rental: Resident Fish and Wildlife Impacts - Phase III	Idaho Department of Fish and Game
1992	Completed Phase I: Summary of resident fish and wildlife issues, concerns; and needs in the Upper Snake Basin as well as potential impacts caused by flow augmentation. Recommendations to protect those resources.	
1994	Completed Phase II: Biological Assessment (IFIM study) of the Upper Snake R. near Blackfoot. Summarized flow augmentation releases since Phase I.	
1996	Developed a method to quantify changes in resident fish habitat resulting from the release of salmon flow augmentation water. Began quantifying changes in fish habitat resulting from flow augmentation.	

1997	In addition to the 1996 work, we began a comparison of flows with and without the salmon augmentation releases to recommended and established instream flows, both in terms of volume of flow and frequency that flows were met and not met.	
1998	Same as 1997 as well as the development of flow scenarios for the benefit of resident fish and wildlife throughout the subregion.	
9800200	Snake River Native Salmonid Assessment	Idaho Department of Fish and Game
1998	Conducted basin-wide population surveys of bull trout and other aquatic species in the headwaters of the North Fork Payette and upper Weiser River drainages.	
1998	Conducted bull trout spawning surveys in selected portions of the Boise River drainage in an effort to identify critical spawning habitat and establish a baseline for future trend monitoring.	
1998	Coordinated with other ongoing projects and entities to avoid duplicating data collection and to assist in prioritizing fieldwork.	
1998	Began construction of Native Fish Database.	
20091	Construct Warm Springs Wetland	Southwest Idaho Resource Conservation and Development Council, Inc.
1998	Environmental Evaluation	
1998	Land Acquired	
1998	Survey and Design	